# AES® HAM RADIO CATALOG SUMMER 1997

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# AMATEUR ELECTRONIC SUPPLY® INC.

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# "A Whole New World of Ham Radio"
# PC-16000 HF Transceiver

Imagine CW/RTTY Without A Key or Computer

## Featuring Automatic CW & RTTY Encode & Decode Plus Digital Signal Processing

Patcomm Corporation proudly introduces the PC-16000: a full featured HF Transceiver with a patented* built-in keyboard interface. Simply plug the standard keyboard (included) into the PC-16000 and instantly enjoy CW and RTTY data communications. Incoming Morse and RTTY data is decoded and displayed on the built-in LCD display. Data is also sent to an RS-232 serial port for display on a "Dumb Terminal" or equivalent. A whole new world of Ham Radio is here now.

```
14.247000←T 1031
14.247000←R M200
```

◄ Standard Display shows RX/TX VFO Freq's, time and current memory

```
YOUR MESSAGE HR
```

◄ Incoming Data

◄ Your Outgoing Data

*US Patent No. 5566205

**ADVANCED FEATURES:**

- **Power Output:** Adjustable 1 to 100 Watts (160 thru 10 Meter Ham Bands)
- **DSP Filtering System:**
  - ***Includes:***
  - 2.4kHz, 1.8kHz, 500Hz, 250Hz and RTTY "Brick Wall" DSP Filters
  - DSP Autonotch Filter for SSB
  - DSP "Denoiser" Reduces Background Noise
- General Coverage Dual Conversion Receiver (1.5–29.9 Mhz) USB, LSB, CW, RTTY and AM
- Collins Mechanical (IF) Filters Included (500Hz and 2.4kHz)
- Highly Effective Noise Blanker
- IF Shift
- Built-In Digital Power/SWR Meter
- Built-In Iambic Keyer (5–75 WPM)
- 100 Memories Plus Scratchpad
- Selectable Tuning Speed: Fixed and Variable
- Built-In Keyboard Interface (Keyboard Included)
- Front Panel Selection of 3 Antenna Inputs
- RS-232 Port(s) for "Dumb Terminal" Display
- Manual Notch for CW and RTTY Modes
- Requires 13 VDC Power Supply

***Designed & Manufactured in the U.S.A.***

patcomm corporation

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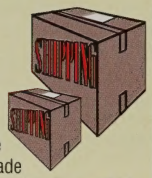
# AES® Amateur Radio Equipment Price List

## Flat-Rate SHIPPING INFORMATION

| AMOUNT OF ORDER | UPS GROUND SHIPPING HANDLING & INSURANCE |
|---|---|
| Up to $100.00 | $4.95 |
| $100.01 to $500.00 | $9.95 |
| $500.01 to $1499.99 | $14.95 |
| $1500.00 & UP | PREPAID |




• Shipping/Handling/Insurance Charges are based on the Order Total at the time of the initial shipment. Changes made to a partially shipped order will not affect the shipping charges • Order amount is Pre-Coupon & Pre-Tax • COD fees Not Included, add $6.50 per carton • Includes adequate insurance • Backorders shipped prepaid at AES® expense • Other UPS shipping methods are charged at Regular Rates with No Credit for UPS Ground rate • Does Not Apply to Truck or DROP-SHIPMENTS

**Complete Equipment & Accessory Inventories**
**★ Competitive Pricing ★ Fast Shipping ★**
**Top Trades ★ Used Gear ★ Service Department**

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**All prices & specifications are subject to change without notice. Due to foreign currency fluctuations, promotions, manufacturer's specials, etc., prices may vary. Please confirm prices before ordering. AMATEUR ELECTRONIC SUPPLY® is not responsible for typographical errors or omissions.**

### CODES SHOWN NEXT TO PRICES

**(T)** • Item too large for UPS. Truck shipment only. No COD, send payment in advance or use charge card for merchandise; freight charges will be collected upon delivery

***NOTE***: Charges for truck shipments from 1-99 lbs are running a **minimum** of $80.00, plus local destination charges. It is advisable to contact a local freight office for a quotation.

**(D)** • **DISCONTINUED** by Manufacturer but still available from stock in limited quantities when this price list was published.

(†) • **TEMPORARY LOW PRICE** due to Special Purchase, over-stock, etc. Quantities may be limited at price shown.

(Δ) • Item *not* discontinued by Manufacturer but probably will not be available from our stores when present stock sold out.

**End of line STORE LOCATION CODES – means Close-out or Special Items were at these stores:** **(m)** Milwaukee; **(w)** Wickliffe; **(f)** Orlando; **(c)** Clearwater; **(v)** Las Vegas; **(*)** all stores

## POLICIES, WARRANTIES & OTHER IMPORTANT STUFF

**PRICING** • AES will pass on decreases in pricing to our customers whenever possible. Sometimes there are increases, confirm pricing when ordering. All prices and specifications are subject to change without notice. We are not responsible for typographical errors or omissions.

**FLAT RATE SHIPPING** • AES has simplified shipping calculations on UPS Ground service to the contiguous. 48 states by utilizing Flat Rate categories. Shipping charges for faster methods must be paid for in advance by check or credit card, no credit applies for the Flat Rate amount.

**COD ORDERS** • Minimum $20.00; UPS Ground only (No Air or Parcel Post); $6.50 COD fee per package + shipping; Cash or Certified Check only.

**AES SHIPS TO** • U.S.A, it's Possessions, APO/FPO, and Canada. **Canadians Note:** Returned equipment not originally manufactured in the U.S. will be subject to valuation and custom charges, plus broker's fees. Check customs before shipping anything to us, including new equipment for warranty repair. AES will not accept any shipments from Canada unless all fees are paid in advance.

**DAMAGED ITEM** • If you receive a shipment and discover damage to it, NOTIFY THE CARRIER IMMEDIATELY. DO NOT return merchandise to us until notified to do so by the carrier. Retain all packaging materials including styrofoam peanuts, inner and outer cartons, labeling, etc. for inspection by the carrier– without this, your claim may be denied. With shipments properly packaged (as all our shipments are), the ultimate responsibility for delivery in good condition rests with the carrier.

**DEFECTIVE ITEMS** • Defective items should be returned to AES or the Manufacturer for Warranty Repair or Replacement, at our option. AES will return it via surface shipping at our expense. If you receive defective equipment, call our Customer Service Department at (414) 358-0333 for immediate attention and instructions.

**RETURNS** • In order to maintain lowest possible prices, AES is unable to offer a Free Trial or Evaluation on new equipment. If permitted, an **AUTHORIZED** return of merchandise for credit (must be like new with all original packing material) will be subject to a **15% RESTOCKING FEE**. The item must be returned **within 10 days after receipt**, prepaid, with a copy of your purchase invoice and a note describing the reason for return. No returns on antennas, towers, cable, items drop-shipped from the manufacturer, audio & video tapes, kits, books or computer software.

| BANK TRANSFER INFO. | MILWAUKEE, WI | WICKLIFFE, OH | ORLANDO, FL | CLEARWATER, FL | LAS VEGAS, NV |
|---|---|---|---|---|---|
| | M&I Marshall & Ilsley Bank, Milwaukee, WI. ABA #075000051. Further credit to M&I Northern Bank to credit account #10-01-6953 in the name of Amateur Electronic Supply | Key Bank, Wickliffe Branch, 29310 Euclid Avenue; Wickliffe, OH 44092. Routing #041001039 for credit to: Amateur Electronic Supply Account #30-005-7505 | Barnett Bank of Orlando, Fashion Square Branch, Orlando, FL Routing #063000047 for credit to: Amateur Electronic Supply Account #1300009536 | Barnett Bank of Clearwater, FL East Clearwater Branch. Routing #063000047 for credit to: Amateur Electronic Supply Account #2450110914 | Bank of America, Decatur Meadows Branch. Routing #1224 000 724 for Credit to: Amateur Electronic Supply Account #230056248 |

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## ADI (ADI)

| | Reg | Sale |
|---|---|---|
| **AT-200** 2.5w 2m FM HT/batt/cgr/TTP .Dmwfcv | $199.95 | 149.95 |
| **AT-200HP** 5w 2m HT/batt/cgr/TTP .....Dmwfcv | 219.95 | 169.95 |
| **AT-201** 2.5w 2m FM HT/batt/cgr/TTP | 214.95 | 169.95 |
| **AT-201HP** 5w 2m FM HT/batt/cgr/TTP | 234.95 | 189.95 |
| **AT-400** 2.5w 440 FM HT/batt/cgr/TTP | 214.95 | 179.95 |
| **AT-400HP** 5w 440 FM HT/batt/cgr/TTP | 234.95 | 199.95 |
| **AT-401** 2.5w 440 FM HT/batt/cgr/TTP | 229.95 | 194.95 |
| **AT-401HP** 5w 440 FM HT/batt/cgr/TTP | 249.95 | 219.95 |
| **AT-600** 2.5w 2m/440 FM HT/batt/cgr/TTP | 349.00 | 299.95 |
| **AT-600HP** 5w 2m/440 FM HT/batt/cgr/TTP | 369.00 | 329.95 |
| **ARC-12** Smart charger | 89.95 | |
| **CHA-072** Wall charger for 7.2v battery | 12.95 | |
| **CHA-120** Wall charger for 12v battery | 12.95 | |
| **CPB-262**/CBP-262 Batt holder; 6 AA nicads | 19.95 | |
| **PCA-145** Cig lighter cable; not for AT-600 | 14.95 | |
| **RBP-072** 7.2v 700ma battery | 34.95 | |
| **RBP-120** 12v 600ma battery | 44.95 | |
| **SLC-200**/SLC-200-S 2.5w case; not AT-600 | 18.95 | |
| **SLC-200-L** 5w carrying case; not for AT-600 | 20.95 | |
| **AR-146** 50w 2m FM Xcvr w/TTP mic | 279.95 | 239.95 |
| **AR-446** 35w 440 FM Xcvr w/TTP mic | 345.95 | 299.95 |

## AEA Data/Software//Timewave (AEA)

| | | |
|---|---|---|
| **DC-1** Cigarette lighter cord | $ 7.95 | |
| **KK-1** Keyboard keyer for IBM PC | 199.95 | |
| **KKCOM** Optional utility program .....Dwfc | 49.95 | |

### DATA CONTROLLERS

| | | |
|---|---|---|
| **PK-12** 1200 bps VHF/UHF packet controller | $ 99.95 | |
| **100K/PK-12** 100K MailDrop upgrade; PK12 | 39.95 | |
| **AC-1** 12vdc 600 ma adaptor | 14.95 | |
| **APRS** Adapter cable; GPS Rcvr-TNC ..Dmfcv | 30.95 | |
| **PK-96**/18K 9600 baud packet controller/32K RAM | 169.95 | |
| **100K** 100K memory upgrade for PK-96 | 39.95 | |
| **PK-96/100K** 9600 baud control/128K RAM | 199.95 | |
| **PC Pakratt Lite** Packet only terminal prog | 49.95 | |
| **DSP-232** Multi-mode data controller | 399.95 | |
| **DSP-1232** Single port multi-mode controller .Dmwfv | 850.00 | 599.95 |
| **DSP-2232** Switchable ch multi-mode control | 699.95 | |
| **9600 bps** modem card option for PK-900 | 75.95 | |
| **AC-4** 12vdc 1A power supply | 19.95 | |
| **ACARS** Aircraft data reception software | 90.95 | |
| **ACARS/900** Air data reception soft; PK900 | 50.95 | |
| **AEA-FAX III-900** PK-900/IBM FAX software | 75.95 | |
| **PC-Pakratt II** w/FAX IBM prog;12/88/232 | 69.95 | |
| **PC-Pakratt for** Windows 2.0 IBM; 12/88/232 | 129.95 | |
| **Log Windows** 3.0 Program for IBM | 49.95 | |
| **IH CABLE** PK-232 - Ico/Yae/Ali HT .....Dwfv | 25.95 | |
| **IM CABLE** PK232 - Ico 8pin mic cbl Dmwfcv | 25.95 | |
| **IW CABLE** PK-232 - Icom W2A cable Dmwfv | 25.00 | 19.95 |
| **KA CABLE** PK-232 - Ken 13-pin cable ..Dfc | 30.95 | |
| **KH CABLE** PK-232 - Ken HT cable ....Dmwfv | 25.95 | |
| **KM CABLE** PK-232 - Ken/Ali 8-pin mic ....Dc | 25.95 | |
| **YM CABLE** PK-232 - Yae 8pin mic cbl ..Dmf | 25.95 | |
| **Technical manual**; PK-232MBX | 25.95 | |
| **WeFax-256** WX FAX prog; DSP1232/2232 | 129.95 | |
| **AEA-FAX III** Facsimile & wire photo program | 149.95 | 99.95 |
| **IDR-96** 5w 441.05MHz data Xcvr/9600 | 499.00 | 449.95 |
| **Morse University II** Morse code Windows soft | 39.95 | |
| **PCB-88** IBM plug-in packet adapter .....Dmwfcv | 179.00 | 99.95 |

## AEA - continued

| | Reg | Sale |
|---|---|---|
| **ANTENNAS** | | |
| **50'** shielded **Isoloop cable, new** style .....Dwf | $ 29.95 | |
| **100'** shielded **Isoloop cable** w/plugs ...Dmwfv | 39.95 | |
| **HR-2** 220MHz ½ wave tele whip w/BNC Dmwfc | 29.95 | |
| **IT-1** IsoTuner Auto tuner; IsoLoop .....Dwfcv | 279.00 | 229.95 |
| **IsoPole 220** 220MHz base station ant Dmwfc | 63.00 | 49.95 |
| **AA.COM** SWR curve IBM soft; 121 & V/U Dmcv | 75.00 | 69.95 |
| **MISCELLANEOUS** | | |
| **ARE-62**/HL-62 Interface cable for Ken ...Dwfc | $ 50.95 | |
| **ARE-63**/HL-63 Interface cable for Yaesu Dwfc | 60.95 | |
| **OP-80** OpLink Fast CW/stereo headset Dmw | 130.00 | 109.95 |
| **DM-1** 2m/220/440 FM deviation meter | 169.95 | |
| **World Clock** .....Dmv | 25.00 | 9.95 |

## AES Computers (AES)

| | |
|---|---|
| **EL-1** 133MHz entry level mini-tower computer | 799.95 |
| **MM-1** 166MHz multimedia mid-tower computer | 1299.95 |
| **14" VGA** 14" VGA monitor | 239.95 |
| **15" VGA** 15" VGA monitor | 329.95 |
| **Modem** 33.6K internal FAX/data modem | 149.95 |
| **Tape Drive** 800MB tape drive | 159.95 |

**Call Dick, Mike or Ron at Milwaukee for AES® COMPUTERS The Two Year Parts and Labor Limited Warranty is handled by: ASC Computers of West Allis, Wisconsin.**

## ARRL (ARR)

| | | |
|---|---|---|
| **100** 1996 Radio Amateur's HB/software ..Dmw | $ 24.95 | |
| **101** 1997 Radio Amateur's Handbook/software | 38.00 | |
| **102** 1997 Radio Amateur's Handbook CD-ROM | 49.95 | |
| **104** 1990-94 QST on CD-ROM | 39.95 | |
| **105** 1985-89 QST on CD-ROM | 39.95 | |
| **106** 1980-84 QST on CD-ROM | 39.95 | |
| **107** 1975-79 QST on CD-ROM | 39.95 | |
| **108** 1970-74 QST on CD-ROM | 39.95 | |
| **110** 200 Meters and Down (early ham radio) | 8.00 | |
| **115** AX.25 (packet radio) | 8.00 | |
| **120** Advanced Class License Manual | 12.00 | |
| **126** Antenna Book w/IBM software | 30.00 | |
| **130** Antenna Compendium | 10.00 | |
| **135** Antenna Compendium II | 14.00 | |
| **138** Antenna Compendium IV w/software | 20.00 | |
| **139** Antenna Compendium V w/software | 20.00 | |
| **140** Antenna Impedance Matching | 20.00 | |
| **142** Best of the New Ham Companion | 12.00 | |
| **145** Complete DX'er | 12.00 | |
| **148** DXCC countries list | 2.00 | |
| **150** Data Book | 15.00 | |
| **156** Extra Class License Manual | 12.00 | |
| **160** FCC Rule Book | 12.00 | |
| **165** First Steps in Radio | 6.00 | |
| **170** General Class License Manual | 12.00 | |
| **175** Getting on Track with APRS | 14.95 | |
| **180** Grid Locator Atlas | 5.00 | |
| **182** Ham Radio Made Easy | 15.95 | |
| **185** Hints and Kinks | 10.00 | |
| **190** Hostage in the Woods | 6.00 | |
| **192** Introduction to Morse Code CD's (2) | 12.00 | |
| **195** Introduction to Morse Code cassettes | 10.00 | |
| **198** Introduction to Radio Frequency Design | 30.00 | |

## ARRL - continued

| | Reg | Sale |
|---|---|---|
| **200** Log Book | 4.00 | |
| **205** Low Profile Amateur Radio | 8.00 | |
| **210** Morse Code the Essential Language | 8.00 | |
| **215** Morse Tutor software for IBM | 20.00 | |
| **216** Morse Tutor Gold (3½") software for IBM | 30.00 | |
| **218** Net Directory | 3.00 | |
| **220** Night Signals | 5.95 | |
| **225** North American Repeater Atlas | 10.00 | |
| **230** Novice Notes: The Book | 6.00 | |
| **236** Now You're Talking II (new ham) | 19.00 | |
| **240** Operating Manual | 25.00 | |
| **248** Personal Computers in the Ham Shack | 15.95 | |
| **249** 1997 Passport to Worldband Radio | 19.95 | |
| **251** 1996 Passport to Worldband Radio Dmfv | 19.95 | 9.95 |
| **252** Packet: Speed, More Speed & Applications | 15.00 | |
| **253** Practical Packet Radio | 15.95 | |
| **254** 1995 ARRL Periodicals CD-ROM | 19.95 | |
| **255** QST binder | 12.00 | |
| **256** QRP Power | 12.00 | |
| **257** 1996 ARRL Periodicals CD-ROM | 19.95 | |
| **260** RFI-How to Find It & Fix It | 18.00 | |
| **265** Radiogram message blanks .....pad | 2.00 | |
| **270** 1997-98 Repeater Directory | 8.00 | |
| **271** 1996-97 Repeater Directory .....Dmwv | 8.00 | 5.95 |
| **272** Repeater Directory software | 14.95 | |
| **276** Satellite Anthology 4th edition | 12.00 | |
| **280** Satellite Experimenter's Handbook | 20.00 | |
| **285** Set 1 5-10 wpm code practice cassettes | 10.00 | |
| **290** Set 2 10-15 wpm code practice cassettes | 10.00 | |
| **295** Set 3 15-22 wpm code practice cassettes | 10.00 | |
| **300** Set 4 13-14 wpm code practice cassettes | 10.00 | |
| **305** Solid State Design | 15.00 | |
| **310** Technician Class License Manual | 6.00 | |
| **316** Technician Exam Review Guide | 9.95 | |
| **320** Transmitter Hunting | 19.00 | |
| **322** TravelPlus for Repeaters CD-ROM | 39.95 | |
| **325** USA Map | 12.00 | |
| **328** Understanding Basic Electronics | 20.00 | |
| **330** W1FB's Antenna Notebook | 10.00 | |
| **335** W1FB's Help for New Hams | 10.00 | |
| **340** W1FB's QRP Notebook | 10.00 | |
| **342** Weather Satellite Handbook | 20.00 | |
| **343** WX Satellite Handbook companion software | 10.00 | |
| **345** World Map | 12.00 | |
| **347** Radio Amateurs World Atlas | 9.95 | |
| **354** Your Mobile Companion | 12.00 | |
| **356** Your VHF Companion | 10.00 | |
| **357** Your Ham Antenna Companion | 10.00 | |
| **358** Your Packet Companion | 8.00 | |
| **361** Your HF Digital Companion | 10.00 | |

### TOMPKINS BOOKS

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|---|---|---|
| **360** CQ Ghost Ship | $ 5.00 | |
| **365** DX Brings Danger | 5.00 | |
| **370** Death Valley QTH | 5.00 | |
| **375** Grand Canyon QSO | 5.00 | |
| **380** Murder by QRM | 5.00 | |

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| | Reg | Sale |
|---|---|---|
| **385** SOS at Midnight | 5.00 | |

### RSGB PUBLICATION

| | Reg | Sale |
|---|---|---|
| **405** Radio Communications Handbook | $ 35.00 | |

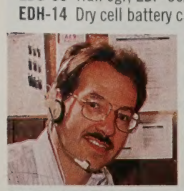
## AIM (AIM)

| | Reg | Sale |
|---|---|---|
| **24-7735P** Coax stripper; RG-58/59/62 | $ 25.50 | 19.95 |
| **24-7736P** Coax stripper; RG-59/6/8281 | 25.50 | 19.95 |
| **24-7739P** Coax stripper; RG-8/11/213 | 41.90 | 29.95 |
| **37-208** 6-socket wall surge protector .....Dm | 32.85 | 6.95 |
| **37-503** 6-socket surge/EMI/RFI filt ..Δmwfcv | 29.00 | 14.95 |
| **38-305** 500ma 3/4.5/6/7.5/9/12vdc adapter | 9.95 | |
| **38-312** 1.2A 1.5/3/4.5/6/7.5/9/12vdc adapt . | 29.00 | 24.95 |
| **38-384** 4A power supply, 5A surge | 65.00 | 39.95 |
| **64-6UUP** 6' RG-58 w/PL-259s | 4.95 | |
| **64-9UUP** 9' RG-58 w/PL-259s | 5.95 | |
| **64-12UUP** 12' RG-58 w/PL-259s | 6.95 | |
| **64-18UUP** 18' RG-58 w/PL-259s | 7.95 | |

## ALINCO (ALI)

### ACCESSORIES FOR DISCONTINUED HT'S

| | Reg | Sale |
|---|---|---|
| **EBP-12NA** 12v 700ma quick charge batt Δm | $ 61.95 | |
| **EDC-2** Cig charging cord; EBP-7NAZ .....Dm | 9.95 | |
| **EDC-8Z** Mobile DC pwr cable w/filter .....Dmv | 20.00 | 18.95 |
| **EDC-22** Wall charger for EBP-12NA .....Δm | 22.95 | |
| **EDC-26** DC cord/cgr w/filter; EBP-10NA ..Δmfv | 17.95 | |
| **EJ-6U** Tone squelch unit .....Dm | 42.00 | 39.95 |
| **ESC-10** Case; DJ-162T w/EBP-10NA .....Dmfv | 21.00 | 14.95 |
| **DJ-480T** 440 FM HT/batt/cgr/TTP .....Δm | 245.00 | 219.95 |
| **EBC-3** Belt clip | 5.95 | |
| **EBC-5** Shoulder belt w/soft case .....Dwfv | 54.00 | 19.95 |
| **EBC-6** Mobile bracket for DJ-180T | 16.95 | |
| **EBP-14N** 7.2v 400ma thin nicad; F1T .....Dmf | 62.00 | 29.95 |
| **EBP-16N** 7.2v 700ma nicad; DJ-F1T ..Δmw | 47.95 | |
| **EBP-18N** 12v 600ma nicad batt; DJ-F1T | 74.95 | |
| **EBP-24N** 7.2v 1200ma batt; 180/580/582T | 78.95 | |
| **EBP-26N** 7.2v 700ma battery; 180/582 | 41.95 | |
| **EBP-28N** 12v 700ma batt; 180/582 | 68.95 | |
| **EDC-8B** Mobile DC power cable w/filter | 21.95 | |
| **EDC-24** Cgr;14/16/18/20/22/24/26/28 ..Dmc | 24.95 | |
| **EDC-45** Quick charger (not for F1) | 99.95 | |
| **EDC-37** 13.8v power cable | 7.95 | |
| **EDC-43** Cig lighter cable | 8.95 | |
| **EDC-49** Batt cgr; EBP-20/22/24/26/28N | 23.95 | |
| **EDH-5** AA dry cell pack; DJ-F1T .....Dmwfcv | 14.95 | |
| **EDH-11** AA alk pack; DJ-180/580/582T | 10.95 | |
| **EDH-12** DC jack adapter; DJ-180T | 10.95 | |
| **EJ-12U** Tone decode unit; DJ-F1T | 51.95 | |
| **EJ-14U** 50 ch memory unit; DJ-180T | 21.95 | |
| **EJ-15U** 200 ch memory unit; DJ-180T | 29.95 | |
| **EME-4** Ear/microphone w/PTT .....Dmwfcv | 34.95 | 29.95 |
| **EME-6** Earphone | 11.95 | |
| **EME-10**/EME-10K Headset w/VOX/PTT | 71.95 | |
| **EME-11** Ear/microphone w/PTT/VOX | 52.95 | |
| **EMS-2Z** Speaker/mic | 44.95 | |
| **EMS-8Z** Remote speaker/mic | 48.95 | |
| **ESC-15** Soft case for DJ-F1T | 17.95 | |
| **ESC-17** Soft case; 580/582T w/EBP-20N | 14.95 | |
| **ESC-18** Soft case; DJ-180T w/EBP-20N | 14.95 | |
| **ESC-19** Soft case; DJ-180T w/EBP-22N | 18.95 | |
| **ESC-26** Soft case; 580/582T w/EBP-22/24N | 14.95 | |
| **DJ-G1T** 2w 2m FM HT/batt/cgr/TTP/ch scope . | 289.00 | 229.95 |
| **EBC-6** Mobile bracket | 16.95 | |
| **EBP-30N** 7.2v 700ma nicad battery | 50.95 | |
| **EBP-31N** 7.2v 1200ma nicad battery | 79.95 | |
| **EBP-32N** 12v 722ma nicad battery | 95.95 | |
| **EDC-8B** Mobile DC power cable w/filter | 21.95 | |
| **EDC-37** 13.8v power cable | 7.95 | |
| **EDC-52** Quick charger | 119.00 | 109.95 |
| **EDC-55** Wall cgr; EBP-30/31/32N | 23.95 | |
| **EDH-14** Dry cell battery case | 15.95 | |



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## ALINCO - continued

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| **EJ-16U** Tone squelch unit | 57.95 | |
| **EME-12** Headset w/earphone/mic/VOX | 70.95 | |
| **EME-13** Headset w/ear bud/mic/VOX | 70.95 | |
| **EME-15** Earphone/mic w/VOX | 55.95 | |
| **EMS-8Z** Remote speaker/mic | 48.95 | |
| **EMS-9** Speaker/mic | 44.95 | |
| **ESC-23** Soft case for EBP-30N | 16.95 | |
| **ESC-24** Soft case for EBP-31N/32N | 21.95 | |
| **DJ-191T** 2m FM HT/batt/cgr/TTP | 264.00 | 209.95 |
| **DJ-191TH** 5w 2m FM HT/batt/cgr/TTP | 289.00 | 229.95 |
| **DJ-G5TH** 5w 2m/440 FM HT/EBP36N/cgr/TTP | 481.00 | 359.95 |
| **DJ-G5TY** 2w 2m/440 FM HT/EBP37N/cgr/TTP . | 466.00 | 379.95 |
| **EBC-6** Mobile bracket | 16.95 | |
| **EBP-33N** 4.8v 650ma nicad battery | 63.95 | |
| **EBP-34N** 4.8v 1200ma nicad battery | 82.95 | |
| **EBP-35N** 7.2v 900ma nicad battery | 97.95 | |
| **EBP-36N** 9.6v 650ma nicad battery | 67.95 | |
| **EBP-37N** 4.8v 700ma nicad battery | 34.95 | |
| **EDC-8B** Mobile DC power cable w/filter | 21.95 | |
| **EDC-60** Quick charger | 94.95 | |
| **EDH-16** Dry cell battery case | 10.95 | |
| **EJ-28U** CTCSS decoder unit; DJ-191T/TH | 42.95 | |
| **EME-6** Earphone | 11.95 | |
| **EME-12** Headset w/earphone/mic/VOX | 70.95 | |
| **EME-13** Headset w/ear bud/mic/VOX | 70.95 | |
| **EMS-8Z** Remote speaker/mic | 48.95 | |
| **EMS-9** Speaker/mic | 44.95 | |
| **ESC-28** Soft case for EBP-33N | 10.95 | |
| **ESC-29** Soft case for EBP-37N | 10.95 | |
| **ESC-30** Soft case for EBP-34N/35N/36N | 10.95 | |
| **DJ-S11T** 340mw 2m FM HT/battery holder | 149.00 | 119.95 |
| **DJ-S41T** 340mw 440 FM HT/battery holder | 149.00 | 119.95 |
| **EBC-6** Mobile bracket | 16.95 | |
| **EDH-18** 12v to 5.5v DC/DC conv/cig plug | 33.95 | |
| **EME-6** Earphone | 11.95 | |
| **EME-13** Headset w/ear bud/mic/VOX | 70.95 | |
| **EME-15** Earphone/mic w/VOX | 55.95 | |
| **EMS-9** Speaker/mic | 44.95 | |
| **ESC-27** Soft case | 16.95 | |
| **DR-M06T** 10w 6m FM Xcvr w/TTP mic | 338.00 | 299.95 |
| **EJ-19U** Memory expansion unit | 28.95 | |
| **EJ-20U** Tone squelch unit | 41.95 | |
| **DR-140T** 50w 2m FM Xcvr w/TTP mic | 288.00 | 259.95 |
| **EJ-20U** Tone squelch unit | 41.95 | |
| **DR-140TQ** 50w 2m FM Xcv/TTP/EJ20U tone sq | 290.00 | 279.95 |
| **DR-150T** 50w 2m FM Xcvr w/TTP mic/9600 | 315.00 | 289.95 |
| **CC-150** Cloning cable for DR-150T | 14.95 | |
| **EJ-20U** Tone squelch unit | 41.95 | |
| **DR-430TQ** 440 FM Xcvr/TTP/EJ-20U tone sq . | 307.00 | 279.95 |
| **EJ-19U** Memory expansion unit | 28.95 | |
| **EDC-19** 9.75' separation kit; 600TB .Δmwfcv | 40.95 | |
| **EDC-20** 16' separation kit; 600TB ....Δmwfcv | 46.95 | |
| **EJ-7U** Tone squelch unit; DR-600TB .....Δm | 69.95 | |
| **EJ-8U** DTMF squelch; DR-590/592/599 ...Δmf | 47.95 | |
| **DR-605T** 50w 2m/35w 440 FM Xcvr/TTP | 512.00 | 459.95 |
| **EJ-24U** Tone decoder unit | 85.95 | |
| **DR-605TQ** 2m/440 FM Xcv/TTP/EJ24U tone sq | 537.00 | 499.95 |
| **DR-610T** 50/35w 2m/440 FM Xcvr/TTP mic | 674.00 | 599.95 |
| **EBC-8** Front control head bracket | 16.95 | |
| **EDS-1** Junction box w/ext spkr, mic jacks | 56.95 | |
| **EDS-2** 3 meter extension cable for EDS-1 | 23.95 | |
| **EDS-3** 5 meter extension cable for EDS-1 | 39.95 | |
| **EJ-23U** Additional memory unit | 35.95 | |
| **EJ-24U** Tone decoder unit | 85.95 | |
| **EHM-36A**/EMS-10 TTP mic; DR-1200T ..Δmfc | 54.95 | |
| **DX-70T** Compact HF Xcvr w/6m | 957.00 | 859.95 |
| **DX-70TH** Compact HF Xcvr/100w 6m/mob bkt | 1074.00 | 969.95 |
| **FREE clock from Alinco - DX-70T/TH+EDX-2 thru 6/30/97** | | |
| **DM-1350**/DM-1350-1 30A 110V ps/35A surge | 196.00 | 179.95 |
| **EBC-8** Front control head bracket | 16.95 | |
| **EBC-9** Mobile bracket | 32.95 | |
| **EDS-4** Rem mt acc kit w/5' cable, 2 covers | 31.95 | |
| **EDS-5** Microphone extension cable | 28.95 | |
| **EDS-6** 15' remote cable | 53.95 | |
| **EDX-1** Manual antenna tuner | 299.00 | 259.95 |
| **EDX-2** 160-10m 200w automatic ant tuner | 344.00 | 309.95 |
| **EMS-14** Desk top microphone | 113.95 | |

## ALPHA DELTA (ALP)

| | Reg | Sale |
|---|---|---|
| **R-T** 200w 500 MHz lightning protector | $ 36.95 | |
| Extra **arc-plug** cartridge for **R-T** | 12.95 | |
| **R-T/N** 200w thru 1 GHz type N protector | 43.95 | |
| Extra **arc-plug** cartridge for **R-T/N** | 12.95 | |
| **HV** 2kw 500 MHz lightning protector | 39.95 | |
| Extra **arc-plug** cartridge for **HV** | 15.95 | |
| **HV/N** 2kw thru 1 GHz type N protector | 46.95 | |
| Extra **arc-plug** cartridge for **HV/N** | 15.95 | |
| **LT** 200w thru 10m 'T' SO-239 protector | 29.95 | |
| Extra **arc-plug** cartridge for **LT** or LT/N | 17.95 | |
| **Delta-2** 500 MHz 2-pos coax switch/protector | 49.95 | |
| **Delta-2/N** 1.3 GHz 2-pos type N switch/protector | 64.95 | |
| **Delta-4** 500 MHz 4-pos coax switch/protector | 79.95 | |
| **Delta-4/N** 1.3 GHz 4-pos type N switch/protector | 89.95 | |
| **D-4** Extra arc-plug; Delta-2/2N/4/4N | 9.95 | |
| **DX-80** 80m 134' complete dipole antenna | 49.95 | |
| **DX-40** 40m 67' complete dipole antenna | 39.95 | |
| **DX-20** 20m 34' complete dipole antenna | 39.95 | |
| **DX-A** 160-80-40m twin sloper antenna | 59.95 | |
| **DX-B** 160-80-40-30m 60' sloper ant | 69.95 | |
| **DX-CC** 80-10m 5-band 82' no trap, no tuner dipole . | 119.95 | |
| **DX-DD** 80-40m 82' Delta Dipole antenna | 89.95 | |
| **DX-EE** 40-10m 4-band 40' no trap, no tuner dipole | 99.95 | |
| **DX-LB** 160-80-40m 100' shortened dipole | 119.95 | |
| **DX-LB Plus** 160/80/40/20/15/10m 100' short dip | 149.95 | |
| **DX-SD** 80/20m 38' short dipole | 99.95 | |
| **DX-SWL** AM broadcast-13m 60' SWL sloper ant | 79.95 | |
| **DX-SWL-S** 90-13m 40' SWL sloper antenna | 59.95 | |
| **DX-Ultra** AM broadcast-30MHz 80' SWL dipole | 119.95 | |
| **Delta-C** Kit w/ctr ins/2 end ins/static protect | 29.95 | |
| **SEP** Extra arc-plug cart; DX-Ultra/Delta-C . | 15.95 | |
| **Delta-CIN** Antenna end insulator .....each | 1.95 | |
| **Outpost** Base tripod mtg sys for mobile ant | 199.95 | |
| **VRC** Variable response speaker console | 249.95 | |
| **VRC-2** Ducted port bass reflex speaker | 99.95 | |

**Also see OUTBACKER**

## AMECO PUBLICATIONS (AME)

| | Reg | Sale |
|---|---|---|
| **4-01** Code Course Instruction Booklet | $ 1.50 | |
| **6-01** Mastering the Morse Code | 2.50 | |
| **12-01** General Class FCC Test Manual | 9.95 | |
| **17-01** Extra Class FCC Test Manual | 5.95 | |
| **23-01** Novice Theory Course | 6.95 | |
| **26-01** Advanced Class FCC Test Manual | 9.95 | |
| **27-01** Novice Class FCC Test Manual | 5.95 | |
| **28-01** Technician Class FCC Test Manual | 5.95 | |
| **78-01** No Code Technician FCC Test Manual | 9.95 | |
| **102-01** Amateur Radio Theory Course | 7.95 | |
| **EN-1** Novice Class Exam | 1.95 | |
| **PC-12-01** General FCC learning software | 24.95 | |
| **PC-17-01** Extra FCC learning software | 24.95 | |
| **PC-26-01** Advanced FCC learning software | 24.95 | |
| **PC-27-01** Novice FCC learning software | 24.95 | |
| **PC-28-01** Technician FCC learning software . | 24.95 | |
| **PC-78-01** No Code Tech FCC learning soft | 29.95 | |

### CODE COURSES - CASSETTE TAPES

| | Reg | Sale |
|---|---|---|
| **100-T** Junior code tape, 0-7½ wpm | $ 5.95 | |
| **101-T** Senior code tapes, 0-18 wpm | 10.95 | |
| **103-T** Advanced code tape, 8-18 wpm | 5.95 | |
| **104-T** Extra Class code tape, 20 wpm | 5.95 | |
| **105-QT** General Class QSO code course tape | 5.95 | |
| **106-QT** Extra Class QSO code course tape | 5.95 | |
| **107-PC-2** IBM Morse Code Course, version 2.0 | 29.95 | |
| **NP-1** Novice Code & Theory Course | 10.95 | |

### CODE PRACTICE OSCILLATORS & CODE KEYS

| | Reg | Sale |
|---|---|---|
| **OCM-2K** Code oscillator & CW monitor kit | $ 19.95 | |
| **OCM-2W** Wired oscillator & CW monitor | 24.95 | |
| **K-1** Bakelite type key | 9.95 | |
| **K-4** Brass type key | 14.95 | |

### PREAMPLIFIERS

| | Reg | Sale |
|---|---|---|
| **TPA** Tunable preamp & indoor active ant | $ 76.95 | 69.95 |
| **P-9T** Power supply for TPA | 9.95 | |
| **PT-3** 2-54 MHz transceiver preamp | 124.95 | 119.95 |
| **P-12T** Power supply for PT-3 | 9.95 | |

## AMECO - continued

| | Reg | Sale |
|---|---|---|
| **DUMMY LOADS & FILTERS** | | |
| **DL-1500** 1500w dummy load | $ 59.95 | |
| **DL-1500F** 1500w dummy load w/fan | 99.95 | 89.95 |
| **HP-75T** 75 ohm high-pass filter | 12.95 | |
| **HP-300T** 300 ohm high-pass filter | 12.95 | |

## AMERITRON (AMR)

| | | |
|---|---|---|
| **AL-80B** 1kw PEP out linear (3-500Z) | 1195.00 | 1099.95 |
| **AL-82** 1.5kw PEP out linear (2 3-500Zs) | 2095.00 | 1799.95 |
| **AL-572** 1.3kw PEP out linear (4 572Bs) | 1395.95 | |
| **AL-800** 1250w PEP out linear (3CX800A7) | 1595.00 | 1449.95 |
| **AL-800H** 1.5kw PEP out linear (2 3CX800A7) | 2295.00 | 2079.95 |
| **AL-811** 600w PEP out linear (3 811As) | 649.00 | 599.95 |
| **AL-811H** 800w PEP out linear (4 811As) | 799.00 | 729.95 |
| **AL-1200** 1.5kw PEP out linear (3CX-1200A7) | 2195.00 | 1879.95 |
| **AL-1500** 1.5kw PEP out linear (8877) | 2695.00 | 2299.95 |
| **ALS-500M** 600w PEP out solid state mob amp | 799.00 | 699.95 |
| **ALS-600** 700w PEP out solid state amp w/ps | 1299.00 | 1129.95 |
| **ARB-700** Amplifier relay buffer | 29.95 | |
| **ATR-15** 1.5kw antenna tuner | 399.00 | 369.95 |
| **ADL-1500** 1.5kw dummy load with oil | 59.95 | |
| **ICP-120** 120v inrush protector | 79.95 | |
| **ICP-240** 240v inrush protector | 79.95 | |
| **QSK-5** Stand alone T/R switch | 349.00 | 329.95 |
| **QSK-5PC** PC board kit; T/R switch | 249.00 | 229.95 |
| **CF-5** Cooling fan for QSK-5 | 39.95 | |
| **RCS-4** 4-pos wireless remote coax switch | 139.00 | 129.95 |
| **RCS-8V** 160-2m 5-pos remote coax switch | 149.00 | 139.95 |

Note: RCS-8V requires 8-wire control cable.

## Antenna Specialists (ASP)

| | | |
|---|---|---|
| **VHF/UHF ANTENNAS** | | |
| **AP-143** 2m on glass cellular look-alike ant | $ 78.25 | 69.95 |
| **APR151.3** 2m 3db on glass antenna | 66.25 | 59.95 |
| **AP-453** 440 on glass cell look-alike ant ....Dfc | 65.00 | 29.95 |
| **KAV-382** On glass replacement mtg kit | 9.95 | |
| **HOLE PLUGS** | | |
| **ASC-34** For 1 1/16" hole ....Dw | $ 4.75 | 49¢ |
| **ASC-37** For ⅜" hole ....Dmf | 2.25 | 99¢ |
| **ASC-39** For ⅞" hole ....Df | 2.25 | 29¢ |

## Antenna Supermarket (ANT)

| | |
|---|---|
| **Eavesdropper*** 60-11m trap dipole SWL ant | $ 79.95 |
| *Specify **SO-239** or **twin**-lead | |
| **SWL Sloper** 120-11m SWL antenna | 79.95 |

## ARROW Antenna (ARA)

| | |
|---|---|
| **146/437-10** 3 el 2m/7 el UHF handheld beam | $ 73.95 |

## ARTSCI (ART)

| | |
|---|---|
| **Amateur Handbook** | $ 14.95 |
| **Lost Users** Manuals | 19.95 |
| **Riding** the Airwaves with Alpha & Zulu | 14.95 |
| **US Repeater 97** Mapbook 97/98 edition | 9.95 |
| **US Repeater CD**-ROM info+US hams ..Dmwfv | 29.95 19.95 |

## ASTATIC (AST)

| | | |
|---|---|---|
| **10DA-L** Dynamic mic head (no stand or cable) | $ 69.99 | 49.95 |
| **D-104-L** Crystal mic head (no stand or cable) | 42.99 | 39.95 |
| **T-UG9** Amplified desk stand | 52.00 | 49.95 |
| **Night Eagle** Brass/black crystal desk mic | 129.99 | 99.95 |
| **T-UG9-D104** Amp mic, 6-wire w/stand | 99.99 | 79.95 |
| **T-UP9-D104-SE** Silver Eagle 6-wire amp | 129.99 | 99.95 |
| **MC-320** Crystal mic cartridge for D-104 | 19.99 | |
| **MC-321** Ceramic mic cartridge for D-104 | 19.99 | |

## ASTRON (ASR)

| | | |
|---|---|---|
| **RS-4L** 3A ps, 4A surge, w/cig lighter socket | $ 57.95 | 49.95 |
| **RS-7A** 5A power supply, 7A surge | 68.95 | 59.95 |
| **RS-10A** 7.5A power supply, 10A surge | 85.95 | 69.95 |
| **RS-12A** 9A power supply, 12A surge | 99.95 | 79.95 |
| **RS-12S** 9A ps, 12A surge, w/speaker | 112.95 | 89.95 |
| **RS-20A** 16A power supply, 20A surge | 121.95 | 99.95 |
| **RS-35A** 25A power supply, 35A surge | 197.95 | 149.95 |
| **RS-35A/220V** 220v 25A ps, 35A surge | 217.75 | 169.95 |
| **RS-50A** 37A power supply, 50A surge | 285.95 | 219.95 |
| **RS-70A** 57A power supply, 70A surge | 339.95 | 259.95 |
| **RS-20M** 16A ps w/meters, 20A surge | 144.95 | 119.95 |
| **RS-35M** 25A ps w/meters, 35A surge | 204.95 | 169.95 |

## ASTRON - continued

| | | |
|---|---|---|
| **RS-50M** 37A ps w/meters, 50A surge | 314.95 | 239.95 |
| **RS-70M** 57A ps w/meters, 70A surge | 372.95 | 289.95 |
| **VS-20ML** Variable 16A ps/meters, 20A surge | 170.95 | 139.95 |
| **VS-35M** Variable 25A ps/meters, 35A surge | 238.95 | 189.95 |
| **VS-50M** Variable 37A ps/meters, 50A surge | 330.95 | 259.95 |
| **RM-35M** 25A rack mt ps/meters, 35A surge | 318.95 | 249.95 |
| **RM-50M** 37A rack mt ps/meters, 50A surge | 354.95 | 279.95 |
| **RM-60M** 50A rack mt ps/meters, 55A surge | 467.95 | 359.95 |
| **SS-25** 20A switching ps, 25A surge | 161.95 | 129.95 |
| **SS-30** 25A switching ps, 30A surge | 186.95 | 149.95 |
| **SS-25M** 20A switching ps/meters, 25A surge | 186.95 | 149.95 |
| **SS-30M** 25A switching ps/meters, 30A surge | 212.90 | 169.95 |
| **12/115** 200w solid state 12vdc-115vac inverter | 86.95 | 64.95 |
| **2412** 9A 22-32vdc to 13.8vdc converter | 73.95 | 59.95 |
| **2412-20** 16A 22-32vdc to 13.8vdc converter | 103.95 | 79.95 |

## AZDEN (AZD)

| | |
|---|---|
| **PCS-7500H** 50w 6m FM Xcvr w/TTP mic | 389.95 |
| **PCS-7800H** 50w 10m FM Xcvr w/TTP mic | 389.95 |
| **PCS-7000H** 50w 2m FM Xcvr w/TTP mic | 339.95 |
| **PCS-7200** 25w 220 FM Xcvr w/TTP mic | 409.95 |
| **PCS-7300H** 35w 440 FM Xcvr w/TTP mic | 439.95 |
| **PCS-9600D** 35w 440 FM Xcvr/9600 baud | 649.95 |
| **TS-32P** Tone decoder | 55.95 |
| **AZ-11** 5w 10m FM HT/batt/cgr/TTP | 379.95 |
| **AZ-21A** 5w 2m FM HT/batt/cgr/TTP | 299.95 |
| **AZ-61** 5w 6m FM HT/batt/cgr/TTP | 379.95 |
| **AD-16** DC power cord for HT | 9.95 |
| **ARD-6M** 6m HT gain antenna | 34.95 |
| **ARD-10M** 10m HT gain antenna | 39.95 |
| **BP-11A** Extra 5w battery | 59.95 |
| **LC-16** Soft case | 19.95 |
| **SDX-514W** Speaker/mic | 49.95 |
| **DM-10** 20 ohm headphones for HF radio | 49.95 |
| **HS-03** Boom mic/headphones for HF Xcvr ...† | 49.95 |
| **PTT-01** Switch for boom mic/headphones | 39.95 |
| **PTT-02** VOX for boom mic/headphones | 49.95 |

## B & K (B&K)

| | | |
|---|---|---|
| **AUDIO TEST INSTRUMENT** | | |
| **2005A** RF generator | $275.00 | 234.95 |
| **CAPACITANCE METERS** | | |
| **810B** Capacitance meter | $ 99.00 | 89.95 |
| **815** Tester (cap/res/Hfe/diode/batt) | 99.00 | 84.95 |
| **820** .1pF to 1F capacitance meter | 279.00 | 229.95 |
| **830** 200 pF to 200mF autoranging meter | 339.00 | 289.95 |
| **875A** Digital LCR meter | 199.00 | 169.95 |
| **878** Universal hand-held LCR bridge | 275.00 | 219.95 |
| **COUNTERS** | | |
| **1803C** 100 MHz frequency counter | $209.00 | 169.95 |
| **1806** 100 MHz multi-function counter ....D | 249.00 | 214.95 |
| **1807** 1.3GHz 1 ppm frequency counter | 299.00 | 259.95 |
| **1823** 175 MHz universal counter | 399.00 | 339.95 |
| **1856A** 2.4 GHz 1 ppm multi-function ctr | 499.00 | 399.95 |
| **CRT RESTORER/ANALYZERS** | | |
| **480** CRT restorer/analyzer | $739.00 | 629.95 |
| **490** Tri Dynamic restorer/analyzer | 1049.00 | 899.95 |
| **DIGITAL PRODUCTS** | | |
| **DP-21** Digital logic probe | $ 34.00 | 29.95 |
| **DP-51** Digital probe ....Dm | 95.00 | 49.95 |
| **EPROM PROGRAMMERS** | | |
| **840** EPROM programmer | $229.00 | 199.95 |
| **841** 4-socket EPROM programmer | 299.00 | 259.95 |
| **842** Universal programmer, PC card interface | 849.00 | 729.95 |
| **843** Universal prog, parallel port interface | 995.00 | 849.95 |
| **GENERATORS** | | |
| **3001** Audio generator | $ 79.00 | 66.95 |
| **3026** 5 MHz sweep/function gen w/dig disp D | 629.00 | 499.95 |
| **4010** 2 MHz function generator | 229.00 | 194.95 |
| **4011** 5 MHz function generator w/counter | 284.00 | 239.95 |
| **4017** 10 MHz func gen w/counter/sweep | 369.00 | 314.95 |
| **4040** 20 MHz func gen/ctr/sweep/AM/FM | 499.00 | 424.95 |
| **INSULATION TESTERS** | | |
| **305** Ins tester, 1000 megohms, 500vdc applied | $129.00 | 109.95 |
| **306** Ins tester, 100 megohms, 500vdc applied | 129.00 | 109.95 |
| **307** Multi-range analog insulation tester | 189.00 | 159.95 |

## B & K - continued

| | Reg | Sale |
|---|---|---|
| **308** Multi-range digital insulation tester | 259.00 | 219.95 |
| **HIGH VOLTAGE PROBE** | | |
| **HV-44** Direct-reading 40kV DC probe | $109.00 | 89.95 |
| **ISOLATION TRANSFORMER** | | |
| **TR-110** Isolation transformer | $219.00 | 189.95 |
| **MULTIMETERS (ANALOG)** | | |
| **114A** 20,000 ohms/volt analog multimeter | $ 42.00 | 39.95 |
| **117** Pocket size analog multitester | 13.95 | |
| **214A** 30,000 ohms/volt analog multimeter .D | 55.00 | 46.95 |
| **300** Insulation tester | 129.00 | 109.95 |
| **MULTIMETERS (DIGITAL)** | | |
| **320** 600A AC clamp meter | $ 79.00 | 69.95 |
| **330** 750A AC multi-function clamp meter | 89.00 | 79.95 |
| **340A** 300A multi-function clamp meter | 109.00 | 89.95 |
| **350A** 1000A multi-function clamp meter | 149.00 | 129.95 |
| **366** 600A AC/DC multi-func clamp meter ...D | 179.00 | 154.95 |
| **367** 2000A AC/DC clamp meter | 169.00 | 149.95 |
| **369** 700A AC/DC true RMS clamp meter | 199.00 | 169.95 |
| **388A** Test Bench DMM, 0.5% accuracy | 119.00 | 99.95 |
| **389** Test Bench DMM, 0.25% accuracy | 139.00 | 109.95 |
| **390** Test Bench DMM, 0.1% accuracy | 159.00 | 134.95 |
| **391** Test Bench DMM, 0.05% accuracy | 179.00 | 149.95 |
| **2405** Mini Pro DMM | 27.95 | |
| **2406** Mini Pro DMM w/temperature | 49.00 | 44.95 |
| **2407** Min Pro autoranging DMM w/bargraph | 55.00 | 49.95 |
| **2700** Credit-card size bargraph DMM | 34.00 | 29.95 |
| **2703A** Tool kit DMM, basic model, 0.5% | 39.00 | 34.95 |
| **2704A** Tool kit DMM w/cap/transistor/diode | 59.00 | 49.95 |
| **2706** Tool kit DMM, 2704A plus temperature | 79.00 | 69.95 |
| **2707** Tool kit DMM, 2704A plus logic & freq | 89.00 | 76.95 |
| **2831A** Digital bench multimeter | 299.00 | 249.95 |
| **2832** 3½-dig 0.5% lab multimeter | 219.00 | 189.95 |
| **2833** 4½-dig 0.05% true RMS multimeter | 400.00 | 339.95 |
| **2835** 3¾-dig 0.5% bench type LCD DMM | 270.00 | 229.95 |
| **2860A** 3½-dig 0.5% ruggedized DMM | 99.00 | 84.95 |
| **2870** Survivor DMM w/bargraph, true RMS | 149.00 | 129.95 |
| **2880** 3¾-dig 0.3% bar true RMS RS232 DMM | 189.00 | 159.95 |
| **3000** Autobench DMM | 270.00 | 229.95 |
| **5360** 50,000 count .1% bar true RMS DMM | 249.00 | 214.95 |
| **5370** 50,000 count .05% bar true RMS DMM | 289.00 | 244.95 |
| **5380** 50,000 count .025% bar true RMS DMM | 349.00 | 299.95 |
| **5390** 50K ct .025% resistive pwr disturb DMM | 395.00 | 339.95 |
| **5460** 50K ct .1% bar true RMS bench DMM | 425.00 | 359.95 |
| **5470** 50K ct .05% bar RMS RS232 bench DMM | 525.00 | 449.95 |
| **5490** 50K ct .025% bar RMS RS232 bench DMM | 675.00 | 574.95 |
| **TLA-20** Autobench test lead set | 269.00 | 249.95 |
| **OSCILLOSCOPES** | | |
| **1422** 20 MHz mini scope ....D | 1395.00 | 1099.95 |
| **1541C** 40 MHz 6" dual trace scope | 799.00 | 679.95 |
| **2000** Autobench oscilloscope | 795.00 | 674.95 |
| **2120** 20 MHz dual trace oscilloscope | 549.00 | 449.95 |
| **2125** 20 MHz dual time base oscilloscope | 646.00 | 519.95 |
| **2160A** 60 MHz dual trace delayed sweep | 1099.00 | 939.95 |
| **2190A** 100 MHz three trace delayed sweep | 1599.00 | 1359.95 |
| **2260** 60 MHz analog scope/cursors/readouts | 1399.00 | 1169.95 |
| **2522A** Digital storage oscilloscope | 1099.00 | 929.95 |
| **2560** 60MHz DSO, cursors/readouts/RS232 | 2395.00 | 2029.95 |
| **5020** 20MHz 40 MS/s digital storage scope | 2219.00 | 1889.95 |
| **5024** 20MHz 40 MS/s differential input DSO | 2290.00 | 1949.95 |
| **5034** 30MHz 40 MS/s differential input DSO | 2330.00 | 1979.95 |
| **5100** 100MHz 40 MS/s digital storage scope | 2495.00 | 2119.95 |
| **5105** 100MHz 40 MS/s IEEE interface DSO | 2695.00 | 2289.95 |
| **5150** 150MHz 200 MS/s digital storage scope | 4995.00 | 4239.95 |
| **POWER SUPPLIES** | | |
| **1604** Portable isolated AC supply ....Dm | $114.00 | 79.95 |
| **1604A** Portable isolated AC supply | 114.00 | 99.95 |
| **1646** 0-16V, 0-10A power supply ....Dm | 499.00 | 299.95 |
| **1651** Power supply; (2) 0-24vdc, .5A; 5V, 4A | 429.00 | 359.95 |
| **1653** 0-150V, 2A isolated AC ps | 319.00 | 279.95 |
| **1655** 0-150V, 3A isolated AC ps/leak tester | 529.00 | 449.95 |
| **1670** Triple output DC power supply | 199.00 | 169.95 |
| **1680** Fixed 6A 13.8vdc power supply | 50.00 | 44.95 |
| **1682** Fixed 15A 13.8vdc power supply | 99.00 | 89.95 |

## B & K - continued

| | | Reg | Sale |
|---|---|---|---|
| 1686 | High current DC power supply | 199.00 | 169.95 |
| 1688 | 3-14VDC, 25A non. power supply | 299.00 | 259.95 |
| 1705 | 0-30VDC, 0-1A LED readout ps | 299.00 | 259.95 |
| 1710 | 0-30VDC, 0-1A power supply | 229.00 | 194.95 |
| 1711 | 0-60VDC, 0-2A power supply | 309.00 | 264.95 |
| 1715 | 0-60VDC, 0-2A LED readout ps | 379.00 | 324.95 |
| 1730 | 0-30VDC, 0-3A power supply | 315.00 | 269.95 |
| 1735 | 0-30VDC, 0-3A LED readout ps | 380.00 | 329.95 |
| 1740 | 0-60VDC, 0-4A power supply | 499.00 | 419.95 |
| 1743 | 0-35VDC, 0-6A LED readout ps | 499.00 | 419.95 |
| 1746 | 0-16VDC, 0-10A power supply | 499.00 | 419.95 |
| 1760 | (2) 0-30V, 2A; (1) 4-6.5V, 5A LED ps | 649.00 | 549.95 |

### SEMICONDUCTOR TESTERS

| | | | |
|---|---|---|---|
| 510 | Portable transistor tester | $239.00 | 199.95 |
| 520B | Industrial transistor tester | 399.00 | 339.95 |
| 541 | Component comparator .....Dm | 449.00 | 269.95 |
| 545 | Circuit analyzer analog signature | 2950.00 | 2499.95 |
| 560A | Programmable PC board tester | 2995.00 | 2549.95 |
| AK-560A | Software package for 560A | 495.00 | 399.95 |
| 898 | SIMM tester | 995.00 | 849.95 |

### SPECTRUM ANALYZERS

| | | | |
|---|---|---|---|
| 2615 | 500 MHz spectrum analyzer | 1795.00 | 1529.95 |
| 2620 | 500 MHz spec analyzer w/tracking gen | 2195.00 | 1869.95 |
| 2625 | 1.05GHz spec analyzer w/AM/FM demod | 2595.00 | 2199.95 |
| 2630 | 1.05GHz spec an w/demod, tracking gen | 3395.00 | 2889.95 |

### TELEPHONE TEST INSTRUMENTS

| | | | |
|---|---|---|---|
| 1045B | Telephone product tester | $599.00 | 499.95 |
| 1050 | Telephone product analyzer | 2260.00 | 1899.95 |

### VIDEO TEST INSTRUMENTS

| | | | |
|---|---|---|---|
| 1211D | Portable color generator | $235.00 | 199.95 |
| 1249B | NTSC generator w/RGB | 569.00 | 489.95 |
| 1251 | NTSC signal generator | 1195.00 | 999.95 |
| 1260 | Deluxe NTSC signal generator | 1995.00 | 1699.95 |
| 1280 | Computer monitor video generator | 429.00 | 369.95 |

### ACCESSORIES

| | | | |
|---|---|---|---|
| CP-3 | AC/DC clamp meter | $ 86.00 | 79.95 |
| PR-28 | HV multimeter probe w/std dual banana | 59.95 | |
| PR-32 | RF detector/demod scope probe w/BNC | 59.95 | |
| PR-37G | Gray dlx 10:1 direct BNC probe .....Dm | 54.50 | 29.95 |

**Other accs available on special order. B & K stocked only at Milwaukee. Call Ron Glisch for B & K.**

## B & W COAX SWITCHES (B&W)

| | | |
|---|---|---|
| CSR-5G | 5-position, side connectors | $ 51.95 |
| CS-6G | 6-position, for desk/wall mounting | 51.95 |

Note: Above switches provide grounding of unused terminals, & are supplied w/face plates & knobs.

### LOW-PASS FILTER

| | | |
|---|---|---|
| FL-10/1500 | 1.5-30 MHz, 1kw, 52 ohms | $ 75.95 |

### ANTENNAS

| | | | |
|---|---|---|---|
| AP-10 | 57" portable 40/20/15/10/6/2m ant | $ 69.95 | |
| AT-55 | 40/20/15/10m 55' trap antenna | 87.95 | 82.95 |
| AT-110 | 80/40/20/15/10m 110' trap antenna | 99.50 | 94.95 |
| AT-110K | As above, but kit | 84.50 | 79.95 |
| AS-160 | 160/80/40/20m 137' trap dipole | 164.50 | 154.95 |
| AS-80 | 80/40/20m 78' trap dipole | 127.50 | 119.95 |
| AS-40 | 40/20/15/10m 40' trap dipole | 164.50 | 154.95 |
| AS-20 | 20/15/10m 23' trap dipole | 127.50 | 119.95 |
| AXS-160 | 160/30m 96' trap dipole | 99.50 | 94.95 |
| AXS-80 | 80/40/15m 72' trap dipole | 127.50 | 119.95 |
| AC-3.5-30 | 80-10m 8-band 90' dipole ..Dmwc | 198.00 | 179.95 |
| AC-1.8-30 | Continuous 1.8-30 MHz antenna | 185.00 | 169.95 |
| BWD-1.8-30 | 1.8-30 MHz 90' folded dipole | 198.00 | 179.95 |
| BWDS-1.8-30 | 1.8-30 stainless 90' folded dip | 273.00 | 249.95 |

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Sales– Milwaukee Store

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## BELDEN (BEL)

| | | | Reg | Sale |
|---|---|---|---|---|
| **52 OHM COAXIAL CABLE** | | | | |
| 8216 | RG-174 (sub-miniature) | per ft. | | 26¢ |
| 8216 | | 100 ft. Roll | 37.29 | 24.95 |
| 8216 | | 500 ft. Roll | 129.87 | 89.95 |
| 8216 | | 1000 ft. Roll | 259.74 | 169.95 |
| 9201 | RG-58 (solid center) | per ft. | | 20¢ |
| 9201 | | 100 ft. Roll | 29.74 | 18.95 |
| 9201 | | 500 ft. Roll | 109.89 | 79.95 |
| 9201 | | 1000 ft. Roll | 216.45 | 139.95 |
| 8240 | RG-58U (solid center) | per ft. | | 26¢ |
| 8240 | | 100 ft. Roll | 38.20 | 24.95 |
| 8240 | | 500 ft. Roll | 131.00 | 89.95 |
| 8240 | | 1000 ft. Roll | 262.00 | 169.95 |
| 8259 | RG-58AU (stranded center) | per ft. | | 29¢ |
| 8259 | | 100 ft. Roll | 43.00 | 26.95 |
| 8259 | | 500 ft. Roll | 137.00 | 89.95 |
| 8259 | | 1000 ft. Roll | 276.00 | 169.95 |
| 8219 | RG-58AU (stranded, foam) | per ft. | | 33¢ |
| 8219 | | 100 ft. Roll | 57.25 | 29.95 |
| 8219 | | 500 ft. Roll | 155.00 | 99.95 |
| 8219 | | 1000 ft. Roll | 387.50 | 189.95 |
| 8262 | RG-58C (non-contaminating) | per ft. | | 36¢ |
| 8262 | | 100 ft. cut | | 32.95 |
| 8262 | | 500 ft. Roll | 173.00 | 119.95 |
| 8262 | | 1000 ft. Roll | 346.00 | 219.95 |
| 9258 | RG-8X (stranded, foam) | per ft. | | 39¢ |
| 9258 | | 100 ft. Roll | 81.25 | 34.95 |
| 9258 | | 500 ft. Roll | 217.56 | 129.95 |
| 9258 | | 1000 ft. Roll | 490.00 | 219.95 |
| 8237 | RG-8U | per ft. | | 64¢ |
| 8237 | | 100 ft. Roll | 102.00 | 59.95 |
| 8237 | | 500 ft. Roll | 390.00 | 249.95 |
| 8214 | RG-8U (foam) | per ft. | | 59¢ |
| 8214 | | 100 ft. Roll | 101.00 | 54.95 |
| 8214 | | 500 ft. Roll | 452.00 | 249.95 |
| 8214 | | 1000 ft. Roll | 898.00 | 479.95 |
| 9913 | RG-8U (low loss) | 100 ft. Roll | 113.00 | 59.95 |
| 9913 | | 250 ft. Roll | 244.00 | 129.95 |
| 9913 | | 500 ft. Roll | 486.00 | 229.95 |
| 9913F | RG-8U (low loss, flexible) | per ft. | | 87¢ |
| 9913F | | 100 ft. Roll | 134.00 | 79.95 |
| 9913F | | 250 ft. Roll | 289.00 | 149.95 |
| 9913F | | 500 ft. Roll | 575.00 | 279.95 |
| 9251 | RG-8A (non-contaminating) | per ft. | | 87¢ |
| 9251 | | 100 ft. Roll | 132.09 | 79.95 |
| 9251 | | 500 ft. Roll | 492.84 | 299.95 |
| 8267 | RG-213 (non-contaminating) | per ft. | | 87¢ |
| 8267 | | 100 ft. cut | | 79.95 |
| 8267 | | 500 ft. Roll | 597.18 | 349.95 |
| 8242 | RG-9U (double shielded) | per ft.,m | | 4.95 |
| 8242 | | 100 ft. Roll,m | 715.00 | 349.95 |
| **75 OHM COAXIAL CABLE** | | | | |
| 8241 | RG-59U (73 ohm, solid center) | per ft. | | 28¢ |
| 8241 | | 100 ft. Roll | 44.00 | 24.95 |
| 8241 | | 500 ft. Roll | 123.00 | 79.95 |
| 8241 | | 1000 ft. Roll | 246.00 | 149.95 |
| 8238 | RG-11 (75 ohm, stranded center) | per ft. | | 79¢ |
| 8238 | | 100 ft. Roll | 124.32 | 69.95 |
| 8238 | | 500 ft. Roll | 470.64 | 279.95 |
| 8213 | RG-11 (75 ohm, solid, foam) | per ft. | | 69¢ |
| 8213 | | 100 ft. cut | | 59.95 |
| 8213 | | 500 ft. Roll | 360.00 | 239.95 |
| **ROTOR CABLE** | | | | |
| 8484 | 4-wire; 4-20 ga; U-105 | per ft. | | 28¢ |
| 8484 | | 100 ft. Roll | 48.00 | 24.95 |
| 8484 | | 500 ft. Roll | 185.00 | 99.95 |
| 8484 | | 1000 ft. Roll | 370.00 | 189.95 |
| 8448 | 8-wire; 2-18, 6-22 ga; CD-45/HAM-IV | per ft. | | 29¢ |
| 8448 | | 100 ft. Roll | 103.75 | 24.95 |
| 8448 | | 500 ft. Roll | 412.50 | 119.95 |
| 8448 | | 1000 ft. Roll | 820.00 | 219.95 |

## BELDEN - continued

| | | | Reg | Sale |
|---|---|---|---|---|
| 9405 | 8-wire; 2-16, 6-18 ga; AR-40/HAM-IV/T²X | per ft. | | 59¢ |
| 9405 | | 100 ft. cut | | 54.9 |
| 9405 | | 500 ft. Roll | 585.00 | 249.9 |
| 9405 | | 1000 ft. Roll | 1167.50 | 499.9 |
| **ANTENNA WIRE** | | | | |
| 8000 | No. 14 stranded ant wire | per ft. | | 21¢ |
| 8000 | | 100 ft. Roll | 30.50 | 17.9 |
| 8000 | | 1000 ft. Roll | 275.00 | 159.9 |
| **No. 8 ALUMINUM GROUND WIRE** | | | | |
| 8018 | Multiples of 50 ft. | each | $ 19.00 | 12.9 |
| 8018 | | 500 ft. Roll | 150.00 | 99.9 |

**Note: All above roll pricing is for rolls as shown only; al other lengths, even if more than roll length shown or a multiple of roll length shown, are sold at the per ft. price.**

### FOAM COAX w/PL-259s ON BOTH ENDS

| | | | |
|---|---|---|---|
| 9349 | 3' RG-58AU foam | $ 19.32 | 14.95 |
| 9350 | 15' RG-58AU foam | 21.63 | 16.95 |
| 9352 | 50' RG-58AU foam | 32.13 | 24.95 |
| 9354 | 50' RG-8U foam | 60.90 | 46.95 |
| 9355 | 75' RG-8U foam | 84.00 | 64.95 |
| 9356 | 100' RG-8U foam | 101.85 | 79.95 |

## BELMERIT (BLM)

| | | | |
|---|---|---|---|
| DM-10S | 3½-digit dig multimeter w/case ..Dm | $ 24.95 | 14.95 |
| DM-3050 | Wide range dig multimtr/freq test Dw | 59.95 | 36.95 |

## BENCHER (BEN)

| | | | |
|---|---|---|---|
| BY-1 | Iambic keyer paddle w/black base | $ 84.95 | 79.95 |
| BY-2 | Iambic keyer paddle w/chrome base | 99.95 | 94.95 |
| BY-3 | Iambic keyer paddle, gold plated | 299.95 | 249.95 |
| BY-4 | Iambic paddle/blk base/gold components | 169.95 | 149.95 |
| ST-1 | Single lever keyer paddle, black base | 84.95 | 79.95 |
| ST-2 | Single lever kyr paddle, chrome base | 99.95 | 94.95 |
| ST-3 | Single lever kyr paddle, gold plated Δmf | 299.95 | 199.95 |
| ST-4 | Sgl lever paddle/blk base/gold comp Δmwfv | 169.95 | 119.95 |
| RJ-1 | Dlx hand key w/navy knob/black base | 81.95 | |
| RJ-2 | Dlx hand key w/navy knob/chrome base | 94.95 | |
| ZA-1A | 3.5-30 MHz 1:1 balun | 39.95 | |
| HWK | Balun hardware kit for 2" boom | 9.95 | |
| YA-1 | 1kw low pass filter | 64.95 | |

## BIRD (BIR)

| | | |
|---|---|---|
| 43 | Thruline Directional wattmeter, SO-239s | $263.95 |
| 4300-400 | Peak reading conversion kit | 125.95 |
| 43P | Peak reading directional meter, SO-239s | 396.95 |
| 4431 | Wattmeter, variable RF tap, SO-239s | 464.95 |
| | Elements (Table 1) 50H-1000H .....each | 88.95 |
| | Elements (Table 1) 2500H, 5000H .....each | 126.95 |
| | Elements (Table 1) 25-1000 MHz .....each | 71.95 |
| | Low-power elements (Table 2) .....each | 95.95 |

**TOP TRADES**
**for your Clean, Late Model HF & VHF/UHF Gear**
**CALL for our Quote Today!**

### Flat-Rate SHIPPING INFORMATION

| AMOUNT OF ORDER | UPS GROUND SHIPPING HANDLING & INSURANCE |
|---|---|
| Up to $100.00 | $4.95 |
| $100.01 to $500.00 | $9.95 |
| $500.01 to $1499.99 | $14.95 |
| $1500.00 & UP | FREE |

• Shipping/Handling/Insurance Charges are based on the Order Total at the time of the initial shipment. Changes made to a partially shipped order will not affect the shipping charges • Order amount is Pre-Coupon & Pre-Tax • COD fees Not Included, add $6.50 per carton • Includes adequate insurance • Backorders shipped prepaid at AES® expense • Other UPS shipping methods are charged at Regular Rates with No Credit for UPS Ground rate • Does Not Apply to Truck or DROP-SHIPMENTS

## BIRD - continued

| | Reg | Sale |
|---|---|---|

### TABLE 1 – Standard Elements

Frequency Bands (MHz)

| Power Range | 2-30 | 25-60 | 50-125 | 100-250 | 200-500 | 400 1000 |
|---|---|---|---|---|---|---|
| 5 watts | — | 5A | 5B | 5C | 5D | 5E |
| 10 watts | — | 10A | 10B | 10C | 10D | 10E |
| 25 watts | — | 25A | 25B | 25C | 25D | 25E |
| 50 watts | 50H | 50A | 50B | 50C | 50D | 50E |
| 100 watts | 100H | 100A | 100B | 100C | 100D | 100E |
| 250 watts | 250H | 250A | 250B | 250C | 250D | 250E |
| 500 watts | 500H | 500A | 500B | 500C | 500D | 500E |
| 1000 watts | 1000H | 1000A | 1000B | 1000C | 1000D | 1000E |
| 2500 watts | 2500H | | | | | |
| 5000 watts | 5000H | | | | | |

### TABLE 2 – Low-Power Elements

| 1 watt | Cat. No. | 2.5 watts | Cat. No. |
|---|---|---|---|
| 25-30 MHz | 025-1 | 25-30 MHz | 025-2 |
| 30-35 MHz | 030-1 | 30-40 MHz | 030-2 |
| 35-40 MHz | 035-1 | 40-50 MHz | 040-2 |
| 40-50 MHz | 040-1 | 50-60 MHz | 050-2 |
| 50-60 MHz | 050-1 | 60-80 MHz | 060-2 |
| 60-80 MHz | 060-1 | 80-95 MHz | 080-2 |
| 80-95 MHz | 080-1 | 95-150 MHz | 095-2 |
| 95-125 MHz | 095-1 | 150-250 MHz | 150-2 |
| 110-160 MHz | 110-1 | 200-300 MHz | 200-2 |
| 150-250 MHz | 150-1 | 250-450 MHz | 250-2 |
| 200-300 MHz | 200-1 | 400-850 MHz | 400-2 |
| 275-450 MHz | 275-1 | 800-1000 MHz | 801-2 |
| 425-850 MHz | 425-1 | | |
| 800-1000 MHz | 801-1 | | |

| | | | |
|---|---|---|---|
| **800-2** 2.5w 800-950MHz element .....Dw | | 86.00 | 59.95 |
| **CC-1** Carrying case | | 46.95 | |
| **EC-1** Element case | | 36.95 | |
| **8080** 25w dummy load/type N male QC Dmfc | | 107.95 | 99.95 |
| **50-T-MN** 50w dummy load w/type N male | | 138.95 | |
| **4273** 1.5-35 MHz variable RF sig sampler* | | 133.95 | |
| **4273-100** For Bird equipment installation | | 144.95 | |
| **4275** 20-1000 MHz variable RF sampler* | | 128.95 | |
| *2 QC connectors required - not included | | | |
| **4275-100** For Bird equipment installation | | 144.95 | |
| **4304A** 25-1000 MHz 500w wattmeter | | 519.95 | |

### QUICK CHANGE CONNECTORS (QC)

| | | | |
|---|---|---|---|
| **4240-050** UHF female (SO-239) .....each | | $ 8.95 | |
| **4240-179** UHF male (PL-259) .....each | | 46.95 | |
| **4240-062** Type N female .....each | | 8.95 | |
| **4240-125** BNC female .....each | | 20.95 | |
| **4240-132** BNC male .....each,Δmw | | 56.00 | 19.95 |

**Other Bird items available on special order**

## BUCKMASTER (BUC)

| | | | |
|---|---|---|---|
| **HamCall** CD-ROM ham listings; IBM/Mac | | $ 50.00 | |

## BUTTERNUT (BUT)

| | | | |
|---|---|---|---|
| **HF-6VX** 80/40/30/20/15/10m 26' vert ant | | $272.00 | 219.95 |
| **HF-9VX** 80/40/30/20/17/15/12/10/6m vert | | 376.00 | 269.95 |
| **A17-12** 17 & 12m kit for HF-6VX | | 39.95 | |
| **CPK** Counterpoise kit | | 100.00 | 89.95 |
| **MPS** Mounting post sleeve | | 8.95 | |
| **RMK-II** Roof mounting kit w/radials | | 100.00 | 89.95 |
| **STR-II** Radial kit only | | 65.00 | 59.95 |
| **TBR-160S** 160m resonator for HF-6VX | | 98.00 | 89.95 |
| **HF-2V** 80/40m 32' vertical | | 220.00 | 179.95 |
| **30-MRK** 30m resonator for HF-2V | | 78.00 | 69.95 |
| **TBR-160S** 160m resonator | | 98.00 | 89.95 |
| **HF-5B** 2 el 20/17/15/12/10m butterfly beam | | 414.00 | 329.95 |

## CES (CES)

| | | | |
|---|---|---|---|
| **410** Personal Patch interconnect .....Dmwf | | $250.00 | 149.95 |
| **4700VP** Telephone interconnect .....† | | 292.00 | 169.95 |
| **SDI-50** Dlx splx/dplx autopatch/rptr controller | | 760.00 | 449.95 |

## CQ (CQX)

| | | | |
|---|---|---|---|
| **1997 Amateur Radio Calendar** | | $ 9.95 | |
| **1997 Radio Classics Calendar** | | 9.95 | |
| **33 Simple** Weekend Projects | | 15.95 | |
| **Amateur Radio Almanac** | | 19.95 | |
| **Building and Using Baluns and Ununs** | | 19.95 | |
| **Buyers Guide** .....Dmwv | | 5.95 | 4.95 |
| **Contest Video** Getting Started in Contesting | | 19.95 | |
| **DXing Video** Getting Started in DXing | | 19.95 | |

## CQ - continued

| | Reg | Sale |
|---|---|---|
| **Ham Sat Video** Getting Started Amateur Satellites | 19.95 | |
| **Ham Video** Getting Started in Ham Radio | 19.95 | |
| **Lew McCoy** on Antennas | 15.95 | |
| **Packet Radio** Operator's Manual | 15.95 | |
| **Packet Video** Getting Started in Packet Radio | 19.95 | |
| **Quad Antenna** Book | 15.95 | |
| **Shortwave** Propagation Handbook | 19.95 | |
| **Vertical** Antenna Handbook | 9.95 | |
| **VHF How To Book** | 15.95 | |
| **VHF Video** Getting Started in VHF | 19.95 | |
| **W6SAI HF Antenna** Handbook | 19.95 | |

## CAMBRIDGE (CAM)

| | | | |
|---|---|---|---|
| **The Art of Electronics** (book) | | $ 59.95 | |

## CASTLE RIDGE (CRO)

### SOLID BASE COPPERWELD ANTENNA WIRE

| | | | |
|---|---|---|---|
| **AN-122** 100 feet No. 12 | | $ 24.95 | |
| **AN-123** 150 feet No. 12 | | 29.95 | |
| **AN-124** 250 feet No. 12 | | 49.95 | |
| **AN-126** 500 feet No. 12 | | 84.95 | |
| **AN-128** 1000 feet No. 12 | | 154.95 | 139.95 |
| **AN-142** 100 feet No. 14 | | 19.95 | |
| **AN-143** 150 feet No. 14 | | 24.95 | |
| **AN-144** 250 feet No. 14 | | 32.95 | |
| **AN-146** 500 feet No. 14 | | 56.95 | |
| **AN-148** 1000 feet No. 14 | | 104.95 | 99.95 |
| **AN-181** 250 feet No. 18 | | 14.95 | |
| **AN-182** 500 feet No. 18 | | 24.95 | |

## CENTAUR (CEN)

| | | | |
|---|---|---|---|
| **CP-1** Cricket Pulser Station tuning accessory | | $ 67.95 | |
| **B11W10-50** 1:1 3kw PEP balun for dipole | | 49.95 | |
| **B11Y10-50** 1:1 3kw PEP balun for yagi | | 49.95 | |
| **B41Y10-50** 4:1 3kw PEP balun for yagi | | 64.95 | |
| **B41LW10-50** 4:1 ladder line to coax balun | | 64.95 | |

## CHEROKEE (CHR)

| | | | |
|---|---|---|---|
| **AH-50** 5w 6m FM HT w/nicad batt | | $399.95 | 199.95 |
| **BC-09** 6 AA cell battery holder | | 13.95 | |
| **BC-12** 8 AA cell battery holder | | 17.95 | |
| **CC-27** Leatherette case | | 13.95 | |
| **DA-27** 12v slide-on adapt; BC-09/NP-126 | | 13.95 | |
| **DC-27** Drop-in nicad charger | | 79.95 | |
| **DW-12** Wall charger | | 7.95 | |
| **EX-01** Speaker/mic | | 29.95 | |
| **MA-27** Mobile-com cig/ext ant adapter | | 44.95 | |
| **NP-126** 12v nicad battery | | 69.95 | |
| **SA-4** Extended super flex antenna | | 24.95 | |

## CLOCKS

| | | | |
|---|---|---|---|
| AEA **World Clock** .....Dmv | | $ 25.00 | 9.95 |
| BMI **972A** 12" 12-hour wall clock | | 28.95 | |
| BMI **972AD** 14" 12/24-hour wall clock | | 32.95 | |
| BMI **973A** 12" 24-hour wall clock | | 49.95 | |
| MFJ **105B** 24-hour quartz wall clock | | 19.95 | |
| MFJ **107B** 24-hour digital clock | | 9.95 | |
| MFJ **108B** 24/12-hour dual disp digital clock | | 19.95 | |
| MFJ **112** Deluxe world map clock | | 24.95 | |
| MFJ **114** Large LED 24-hour clock | | 39.95 | |
| MFJ **116** 24/12-hr LED clock/10 minute timer | | 14.95 | |

## COAX SEAL (UNV)

| | | | |
|---|---|---|---|
| **104** ½" x 60" coax seal | | $ 2.95 | |

## COMET (CMT)

### MOBILE ANTENNAS

| | | | |
|---|---|---|---|
| **B-10** 2m/440 2.15db 12" cell look-alike ant | | $ 39.95 | |
| **B-10NMO** 2m/440 2.15db 12" cell look-alike NMO | | 39.95 | |
| **B-20** 2m/440 2.15/5db 30" cell look-alike ant | | 56.95 | |
| **B-20NMO** 2m/440 2.15db/5db 30" cell look NMO | | 56.95 | |
| **CA-2X4SR** 2m/440 3.8/6.2db 40" mob ant | | 64.95 | |
| **CA-220MR** 220 4.2db 3' 3" fold-over ant | | 49.95 | |
| **CA-HV** 40/15/10/6/2m 5' 10" mobile ant | | 139.95 | 129.95 |
| **L-14** 20m loading coil for CA-HV | | 36.95 | |
| **CHL-28J** 2m/440 3/5.5db 36" mobile ant | | 35.95 | |
| **CHL-28JNMO** 2m/440 3/5.5db 36" NMO ant | | 35.95 | |
| **CHL-62S** 2m/440 3.5/6db 42" mobile ant | | 49.95 | |
| **CHL-62SNMO** 2m/440 3.5/6db 42" NMO ant | | 49.95 | |
| **CHL-350** 10/6m 0/2.15db fold-over 7' ant | | 79.95 | |

## COMET - continued

| | Reg | Sale |
|---|---|---|
| **CMW-202N** 900 MHz 5.1db 18" type N ...Dwfv | 42.95 | 29.95 |
| **CX-224** 2m/220/440 2.15/3.2/5.5db 42" mobile | 79.95 | |
| **CX-224NMO** 2m/220/440 2.15/3.2/5.5db 42" NMO | 79.95 | |
| **CX-801** 2m/440/1.2 3/6.8/9db 39" N mob Dm | 89.95 | 59.95 |
| **FL-7HA** 40m 40" mobile antenna .....Dmwf | 82.95 | 59.95 |
| **FL-14HA** 20m 37" mobile antenna .....Dmv | 82.95 | 59.95 |
| **FL-28HA** 10m 33" mobile antenna .....Dv | 82.95 | 59.95 |
| **FL-50HA** 6m 33" mobile antenna .....Df | 82.95 | 59.95 |
| **FS-74B** 440/1.2 black 5.1/7.2db 22" N ....Dwf | 79.95 | 59.95 |
| **FS-92B** 2m/440/1.2 2.1/4.1/6.8 23" N Dmwv | 82.95 | 59.95 |
| **HA-4S** 40/15/12/10m 4' 5" mobile ant | 199.95 | 179.95 |
| **L-14HS** 20m loading coil for HA-4S | 39.95 | |
| **HA-028** 10m 33" ¼ wave mobile ant ...Dmwfv | 82.95 | 59.95 |
| **HA-035** 80m 45" mobile antenna | 82.95 | |
| **HA-050** 6m 33" ¼ wave mobile antenna | 82.95 | |
| **HP-32** 2m/440 3/5.5db 34" 350/250w ant | 89.95 | |
| **M-24B** 2m/440 1.7/4.1db mag mt ant w/BNC | 39.95 | |
| **M-24M** 2m/440 1.7/4.1db mag ant w/PL259 | 39.95 | |
| **QE-07** 40m 50" mobile antenna | 82.95 | |
| **QE-14** 20m 49" mobile antenna | 82.95 | |
| **QE-21** 15m 49" mobile antenna | 82.95 | |
| **QE-28** 10m 46" mobile antenna | 82.95 | |
| **OP-07** 40m optional element for QE ant | 42.95 | |
| **OP-14** 20m optional element for QE ant | 42.95 | |
| **OP-21** 15m optional element for QE ant | 42.95 | |
| **OP-28** 10m optional element for QE ant | 42.95 | |
| **R-2000** 900MHz 5.1db 19" type N mob ant | 42.95 | |
| **SBB-2** 2m/440 2.15/3.8db 18" black mobile | 39.95 | |
| **SBB-2NMO** 2m/440 2.15/3.8db 18" blk NMO | 39.95 | |
| **SBB-5** 2m/440 3/5.5db 38" black mobile ant | 59.95 | |
| **SBB-5NMO** 2m/440 3/5.5db 38" black NMO | 59.95 | |
| **SBB-7** 2m/440 4.5/7.2db 4' 7" black mob ant | 82.95 | |
| **SBB-7NMO** 2m/440 4.5/7.2db 4' 7" blk NMO | 82.95 | |
| **SB-14** 6m/2m/440 43" chrome mobile ant | 69.95 | |
| **SB-15** 6m/2m/440 2.15/4.5/7.2db 5' chr mob | 99.95 | |
| **SB-25** 2m 4.1db 4' 8" mobile ant .....Dwv | 49.95 | |
| **SBB-25** 2m 4.1db black mobile antenna | 49.95 | |
| **SB-25NMO** 2m 4.1db 4' 8" NMO mob ...Dmwc | 49.95 | |
| **SBB-25NMO** 2m 4.1db black NMO mob ant | 49.95 | |
| **SB-44** 440 5db 29" mobile antenna | 54.95 | |
| **SB-83** 2m/440/cell 3/6/8.4db 35" type N ant | 78.95 | |
| **SB-94** 2m/440/1.2 2.15/5.1/7.2db 24" N ant | 75.95 | |
| **SB-97** 2m/440/1.2 3/6.8/9.6db 39" type N | 89.95 | |
| **SB-123** 1.2GHz 7.2db 24" type N mobile ant | 54.95 | |
| **SB-214W** 2m/220 3' 1.7/3.4db mob ant | 62.95 | |
| **SF-245** 2.4 GHz 7db 18" fg type N ant | 61.95 | |
| **Z-750** 2m/440 2.1/5.5db 39" theft resistant | 62.95 | |
| **Z-780** 2m/440 4.5/7.2db 5' theft resistant | 82.95 | |

### MOBILE MOUNTS, ETC

| | | | |
|---|---|---|---|
| **3D4M** Mobile mt, 13' coax w/UHF connectors | | $ 24.95 | |
| **3D4N** Mobile mt, 13' coax w/type N | | 28.95 | |
| **3D5M** Mobile mt, 16.5' coax w/UHF connectors | | 27.95 | |
| **5D4N** Roof mount, 13' coax w/type N | | 31.95 | |
| **AD-10N** N-NMO mount adapter | | 17.95 | |
| **AD-15M** UHF-NMO mount adapter | | 17.95 | |
| **CA-MS1** Mag mt only, no coax; add 3D4M, etc | | 26.95 | |
| **CG-4M** RS-2 gutter mount w/13.5' coax | | 29.95 | |
| **CK-3M** Dlx 2-step 10' cable w/UHF connectors | | 33.95 | |
| **CK-3M5** Dlx 2-step 16.5' cable w/UHF connects | | 39.95 | |
| **CK-5N** Dlx cable assembly w/type N | | 47.95 | |
| **CM-5M** Hvy duty mag mt, coax, max 4' ant | | 39.95 | |
| **CQ-5M** Dlx black QD trunk lip mt w/17' coax | | 66.95 | |
| **CR-5M** Std coax assy, 16.5' coax, UHF conn | | 19.95 | |
| **CT-5M** Trunk lip mount w/17' coax | | 39.95 | |
| **GR-5M** Dlx tnk lip mt w/ coax; matches SB | | 67.95 | |
| **GR-5N** Dlx N tnk lip mt w/ coax; matches SB | | 69.95 | |
| **MG-SRB** Med duty mag mt w/UHF/BNC .....Df | | 38.95 | 19.95 |
| **MS-3FVNN** Std duty mag mount w/type N | | 49.95 | |
| **MS-5LXMM** Dlx mag mt, 2-step cable/UHF mt | | 57.95 | |
| **RS-2** Small gutter mount | | 22.95 | |
| **RS-6** Pipe clamp mount | | 29.95 | |
| **RS-9** Trunk lip mount, no coax | | 13.95 | |
| **RS-20** Gtr mt; small/med ants, no coax .....Dv | | 29.95 | 19.95 |
| **RS-21** Adj 360 degree hatch/tnk mt, no coax | | 34.95 | |
| **RS-80** Adjustable gutter mt, no coax ..... Df | | 32.95 | 19.95 |

## COMET - continued

| | Reg | Sale |
|---|---|---|
| **RS-81** Adj trunk/hatch mount, no coax | 34.95 | |
| **RS-500** Mini heavy duty gutter mount | 29.95 | |
| **RS-520** Mini heavy duty trunk/hatch mount | 29.95 | |
| **RS-820** Low profile trunk lip mount, no coax | 45.95 | |
| **RS-850** Lug rack/to 1.75" pipe mt, no coax | 42.95 | |
| **TS-1M** Trunk lip mt w coax ....Df | 45.95 | 29.95 |
| **WS-1M** Window clip mt w/UHF connectors | 64.95 | |

### BASE STATION ANTENNAS

| | | |
|---|---|---|
| **CA-62DB** 52-54MHz 6.5db 21.75' base ant | $164.95 | 154.95 |
| **CA-712EF** 440 9db 10' 5" base antenna | 139.95 | 129.95 |
| **CA-1243Z** 440/1.2GHz 9.4/12.8db 7' N ..... Df | 161.95 | 109.95 |
| **CA-ABC21** 2m 3.4db 4' 7" base antenna | 59.95 | |
| **CA-ABC22A** 2m 6,5db 9' 5" base/rptr ant | 79.95 | |
| **CA-ABC23** 2m 7.8 db 13' 4" base/rptr ant | 135.95 | 124.95 |
| **CA-F22GF** 136-175 6db 8' 10" tun ...ΔTmwfv | 169.95 | 139.95 |
| **CA-F72GF** 440-470 6db 3' 6" tunable ant | 129.95 | 119.95 |
| **CA-Super22** 220 6.6db 8' 2" base ant | 159.95 | 149.95 |
| **CMR-241** 2m/440 4.5/7.2db 6.5' rptr ant | 174.95 | 164.95 |
| **CX-333** 2m/220/440 6.5/7.8/9db 10.25' ant | 199.95 | 179.95 |
| **CYA-1216E** 1.2GHz 16el 16.6db 4' 5" N beam | 149.95 | 139.95 |
| **DS-15** 6m/2m/440/900/1.2 discone antenna | 129.95 | 119.95 |
| **FP-19** 900 MHz 16db 7' 4" type N base/rptr | 121.95 | 112.95 |
| **GP-3** 2m/440 4.5/7.2db 5' 11" base/rptr ant | 109.95 | 99.95 |
| **GP-6** 2m/440 6.5/9db 10' 2" base/rptr ant | 174.95 | 164.95 |
| **GP-9** 2m/440 8.5/11.9db 17' 8" base/rptr | 224.95 | 199.95 |
| **GP-9N** 2m/440 8.5/11.9db 17' 8" N base/rptr | 224.95 | 199.95 |
| **GP-15** 6/2m/440 3/6.2/8.6db 8' base | 174.95 | 164.95 |
| **GP-21**/CA-1221S 1.2 14.8db 8.5' N base/rptr | 189.95 | 169.95 |
| **GP-24** 2.4GHz 12.4db 2' type N base/rptr | 229.95 | 199.95 |
| **GP-93** 2m/440/1.2 4.5/7.2/10db 5' 7" type N | 144.95 | 134.95 |
| **GP-98** 2m/440/1.2 6.5/9/13.5db 9' 8" N ant | 224.95 | 199.95 |
| **GPX-2010** 2m/440 9.5/13.2db 23' 4" base/rptr | 399.95 | 349.95 |
| **PYA-913** 900MHz 13el 15.8db 4' 8" type N beam | 169.95 | 159.95 |

### DUPLEXERS AND TRIPLEXERS

| | | |
|---|---|---|
| **CF-142** 1.3-150/200-480 600/400w UHF/leads | $ 79.95 | |
| **CF-360A** 1.3-30/50-470 600w UHF w/leads | 69.95 | |
| **CF-360B** 1.3-30/50-470 600w UHF/common lead | 69.95 | |
| **CF-413A** 440/1.2 500/200w N w/leads | 74.95 | |
| **CF-413B** 440/1.2 500/200w N/UHF/N leads | 74.95 | |
| **CF-416A** 2m/440 800/500w UHF w/leads | 54.95 | |
| **CF-416C** 2m/440 800/500w N/UHF/N leads | 54.95 | |
| **CF-416W** 1.3-250/400-1400 400/200w N/leads | 79.95 | |
| **CF-530** 1.3-90/125-470 600w UHF w/leads | 74.95 | |
| **CF-706** 1.3-56/75-320 350w UHF w/leads | 74.95 | |
| **CF-4130A** 440/1.2 500/200w N, no leads | 74.95 | |
| **CF-4160I** 2m/440 800/500w UHF/UHF/N, no leads | 52.95 | |
| **CF-4160J** 2m/440 800/500w SO239, no leads | 58.95 | |
| **CF-4160K** 2m/440 800/500w all UHF, no leads | 52.95 | |
| **CFX-324A** 2m/220/440 600w UHF w/leads | 88.95 | |
| **CFX-324B** 2m/220/440 600w UHF, no leads | 85.95 | |
| **CFX-431A** 2m/440/900-1.2 N/UHF/N/N, leads | 89.95 | |
| **CFX-431B** 2m/440/900-1.2 N/UHF/UHF/N, leads | 89.95 | |
| **CFX-514** HF/2m/440 800/800/500w UHF w/leads | 84.95 | |
| **CFX-514J** HF/2m/440 800/800/500w UHF, no leads | 79.95 | |
| **CFX-4310B** 2m/440/900-1.2 N/UHF/N/N, no leads | 84.95 | |
| **CFX-4310C** 2m/440/1.2; Kenwood TM-741A/941A | 84.95 | |
| **CFX-5140** HF/6m/2m/440 800/800/500w UHF, no leads | 79.95 | |

### HT AND HAND-HELD SCANNER ANTENNAS

| | | |
|---|---|---|
| **CH-32** 2m/440 1.75" BNC antenna | $ 32.95 | |
| **CH-72S** 2m/440 0/3.2db 15" BNC antenna | 29.95 | |
| **CH-701X** 2m/440/900 2/3.4/5.5db 19" BNC | 54.95 | |
| **CH-720C** 2m/440 semi-rigid 0/3.8db 18" BNC | 39.95 | |
| **CH-722SA** 2m/440 3/5.5db BNC whip ant | 45.95 | |
| **CY-1205BNC** 1.2GHz 11db 7" BNC beam | 49.95 | |
| **SH-55** 2m/440 1.5/3.2db 15" BNC ant | 33.95 | |
| **SH-95** 2m/440/1.2 1.5/2.15/5.5db BNC ant | 49.95 | |
| **SMA-3** 2m/440 1.2/1.7db 9.75" SMA ant | 41.95 | |
| **SMA-501** 2m/440/900 1.5" SMA ant | 29.95 | |

**JARED, KB9LTV**
Sales– Milwaukee Store

**If possible, phone in during afternoon hours for least chance of busy lines**

**1-800-558-0411**

## COMET - continued

### SWR/POWER METERS & MINIMETERS

| | | |
|---|---|---|
| **CM-120** 1240-1300 MHz type N minimeter | $ 99.95 | |
| **CM-690** 1.9-60 MHz 20/150w minimeter | 79.95 | |
| **CM-720** 140-150/430-450 MHz minimeter | 79.95 | |
| **CM-720N** 140-150/430-450 type N minimeter | 84.95 | |
| **CM-900** 900-920 MHz N minimeter .....Dmv | 99.95 | 69.95 |
| **CM-903** 900-920 MHz type N minimeter | 99.95 | |
| **CMX-1** 1.8-60 MHz 2000w SWR/pwr/rem head | 209.95 | 189.95 |
| **CMX-2** 1.8-200MHz 200w SWR/pwr/rem head | 199.95 | 179.95 |
| **CMX-3** 140-525 MHz 200w SWR/pwr/rem head | 189.95 | 169.95 |
| **EKS-3** 10' remote head extension cable | 23.95 | |

### ACCESSORIES

| | | |
|---|---|---|
| **CS-290P** 1500MHz 150w N lightning protect | $ 39.95 | |
| **CS-400P** 500MHz 250w lightning protect | 34.95 | |
| **CSP-30** Mini speaker w/magnet mt | 34.95 | |
| **CSP-80** Mini spkr w/mag mt, noise filt, mute | 39.95 | |
| **CSW-20N** 0-1300MHz N coax switch .....Dm | 99.95 | 64.95 |
| **HM-P2F** Mini spkr/mic; Ali/Ico/Sta/Yae | 32.95 | |
| **HM-P2K** Mini spkr/mic for Kenwood | 32.95 | |
| **HM-P4F** Mini "HT" spkr/mic; Ali/Ico/Sta/etc | 32.95 | |
| **HM-P4K** Mini "HT" spkr/mic for Kenwood | 32.95 | |
| **HM-P4Y** Mini "HT" spkr/mic for Yaesu | 32.95 | |

## Communications Specialists (COM)

| | | |
|---|---|---|
| **SS-32P**/SS-32PA Prog CTCSS encoder | $ 28.95 | |
| **SS-32SMP** Hybrid micro-sized encoder | 27.95 | |
| **TE-32** 32-tone CTCSS prog encoder box | 49.95 | |
| **TE-64** 64-tone CTCSS/burst switch enc box | 79.95 | |
| **TS-32P** 32-tone CTCSS prog encoder/decoder | 57.95 | |
| **DTD-1** DTMF decoder | 49.95 | |
| **ID-8** Automatic morse station identifier | 69.95 | |

## CONNECTORS

### AMPHENOL COAX CONNECTORS (AMP)

| | | |
|---|---|---|
| **83-1SP-1050** Male coax plug (PL-259) | $ 1.95 | |
| **83-1SP** Silver plated coax plug (PL-259) | 2.95 | |
| Van Gorden (**VAN**) **silver plated** teflon PL-259 | 2.99 | |
| **83-185** Reducer for RG-58 (UG-175) | .95 | |
| **83-168** Reducer; RG-59/RG-8X (UG-176) | .95 | |
| **83-1AP** Right angle adaptor (UG-646) | 5.95 | |
| **83-1J** Double female adaptor (PL-258) | 3.95 | |
| **83-1R** Female chassis mt socket (SO-239) | 2.95 | |
| **83-1H** Hood; in-line use (UG-106) .ΔmwfcV | 4.36 | 99¢ |
| **83-1T** T-connector adaptor (M-358) | 8.95 | |
| **83-877** Double male adaptor | 10.95 | |
| **83-878** Single hole ⅜" chassis socket | 2.95 | |
| **31-002** BNC male connector for RG-58 | 3.95 | |
| **31-012** BNC male connector; RG-59/RG-8X | 4.95 | |
| **31-221** BNC female chassis socket | 2.95 | |
| **82-24** Type N female chassis mt socket | 4.95 | |
| **82-61** Type N male connector for RG-8 | 7.95 | |
| **82-64** Type N right angle adaptor | 20.95 | |
| **82-202-1006** Type N male; 8214/9913/9913F | 7.95 | |
| **82-209** Type N female in-line for RG-8 | 7.95 | |
| **34025** Type N male connector for RG-58 | 6.95 | |

### AMPHENOL COAX ADAPTORS (AMP)

| | | |
|---|---|---|
| **2900** SO-239 to BNC male adaptor | $ 9.95 | |
| **4400** SO-239 to type N male adaptor | 13.95 | |
| **34125** Type N female - PL-259 adapt | 21.95 | |
| **45250** Type N double male adaptor .....Dw | 16.19 | 9.95 |
| **31-28** BNC female to PL-259 adaptor | 9.95 | |
| **83-10** SO-239 to Motorola/phono plug .....Dm | 10.84 | 6.95 |

### AIM COAX CONNECTORS & ADAPTORS (AIM)

| | | |
|---|---|---|
| **25-7351** Chassis mt SO-239 double female | $ 5.95 | |
| **25-7365** BNC female to SO-239 | 5.95 | |
| **25-7420** BNC male to SO-239 | 3.95 | |
| **26-8010** Type N double female | 5.95 | |
| **26-8011** Type N chassis mount | 2.95 | |
| **26-8015** N male to SO-239 | 7.95 | |
| **26-8016** BNC female to N male | 7.95 | |
| **26-8017** BNC male to N female | 7.95 | |
| **27-8110** BNC female to RCA male .....ΔmwfV | 2.40 | 1.95 |
| **27-8120** BNC female to PL-259 | 3.95 | |
| **27-8130** BNC double male | 4.95 | |
| **27-8140** BNC T; 2 female, 1 male | 3.95 | |
| **27-8142** BNC T, 3 male .....ΔmwfV | 8.40 | 3.95 |
| **27-8450** BNC chassis mt, 4 screw holes | 3.95 | |
| **27-8460** ⅜" hole BNC chassis mt | 1.95 | |

## CONNECTORS - continued

| | Reg | Sale |
|---|---|---|
| **27-8470** Dual BNC chassis mount | 3.95 | |
| **29-3855** BNC female to SMA male | 8.95 | |
| **29-4140** SO-239 to mini PL-259 | 5.95 | |

### CONNECTORS UNLIMITED (CON)

| | | |
|---|---|---|
| **306** SO-239 to BNC male adaptor .....Δm | $ 2.76 | 1.9 |
| **1721** 7-pin DIN plug .....Δm | 1.38 | 99 |
| **X-3013** 8-pin female mic plug .....Δmw | 3.11 | 2.9 |

### Switchcraft 1/4 " Plugs w/Solder Terminals (SWI)

| | | |
|---|---|---|
| **267** 3-conductor, plastic handle .....Δm | $ 5.50 | 3.9 |
| **237** 3-cond, plastic handle, rt angle plug Δm | 5.15 | 95 |
| **260** 3-conductor w/screw terminals .....Δm | 6.95 | 4.9 |
| **297** 3-conductor, metal handle .....Δm | 6.55 | 3.9 |
| **250** 2-conductor, plastic handle | 3.95 | |
| **220** As abv, w/screw terminals, rt angle plug | 5.95 | |
| **280** 2-conductor, metal handle | 4.95 | |

### SWITCHCRAFT PHONO-TYPE CONNECTORS (SWI)

| | | |
|---|---|---|
| **3501MC** Phono plug with cable clamps | $ .95 | |
| **3502** Shielded phono plug | 2.95 | |
| **3507** RF-type phono plug | 3.95 | |

### VANCO MICROPHONE CONNECTORS (VCO)

| | | |
|---|---|---|
| **CBC-2** 2-pin female mic plug | $ 3.95 | |
| **CBC-3** 3-pin female mic plug | 2.95 | |
| **CBC-4** 4-pin female mic plug | 4.95 | |
| **CBC-4P** Panel mt 4-pin male | 2.95 | |
| **CBC-5** 5-pin female mic plug | 3.95 | |
| **CBC-5P** Panel mt 5-pin male | 2.95 | |
| **CBC-6** 6-pin female mic plug | 4.95 | |
| **CBC-6P** Panel mt 6-pin male | 3.95 | |
| **JCBC-8** 8-pin female mic plug | 5.95 | |
| **CBC-8P** Panel mt 8-pin male | 5.95 | |

### KENWOOD DIN PLUGS (KEN)

| | | |
|---|---|---|
| **7-pin DIN** plug | $ 4.95 | |
| **8-pin DIN** plug | 6.95 | |
| **13-pin DIN** plug | 9.95 | |

### VANCO MINI PHONE PLUGS (VCO)

| | | |
|---|---|---|
| **P-25** 2.5mm sub-miniature phone plug | $ .99 | |
| **P-35** 3.5mm miniature phone plug | .99 | |
| **P-12V** Cig lighter plug w/leads | 2.95 | |

## Connect Systems (CSY)

| | | |
|---|---|---|
| **CS-700** Simplex interconnect .....Dmwfv | $485.00 | 289.95 |
| **CS-800** Full duplex patch & repeater controller | 485.00 | 359.95 |
| **CS-900** Simplex interconnect | 485.00 | 359.95 |
| **9801** Elec voice delay (EVD); Pri Pch V .....Δm | 141.50 | 89.95 |
| **8200D** Full dplx patch/rptr controller ..Dmwfv | 713.00 | 449.95 |
| **CD-2** DTMF/CTCSS/DCS decoder unit/RS-232 | 284.00 | 249.95 |
| **CD-2P** PC application program for CD-2 | 113.00 | 99.95 |
| **LT-2P** PC application program for LT-2 ...Δm | 113.00 | 69.95 |
| **CS-1688** Deluxe DTMF dec/controller .....Df | 213.00 | 169.95 |

## COYNE (COY)

### HAM RADIO TEST GENERATOR FOR MACINTOSH

| | |
|---|---|
| **MacHam** no code **Tech**nician, includes Novice 2A | $ 39.95 |
| **MacHam Gen**eral | 34.95 |
| **MacHam Adv**anced | 34.95 |
| **MacHam Extra** | 34.95 |
| **MacHam Radio** Morse Code training software | 39.95 |

## CROSS DEVICE (CRS)

| | |
|---|---|
| **STUF** Coax connector waterproofing filler | $ 4.95 |

## CUSHCRAFT (CUS)

### VHF/UHF FM BEAMS (Vertical polarization)

| | | |
|---|---|---|
| **A148-3S** 2m, 3 el wideband beam | $ 47.50 | 44.95 |
| **A148-10S** 2m, 10 el wideband beam | 85.00 | 79.95 |
| **A148-20S** 2 A148-10S vert stacked | 233.00 | 189.95 |
| **A449-6S** 440 MHz, 6 el, 3' boom, 10 db | 45.00 | 42.95 |
| **A449-11S** 440 MHz, 11 el, 4.5' boom, 13 db | 69.00 | 64.95 |
| **A270-6S** 2m/440, 3/3 el, 2.8' boom, 7.8 db | 75.00 | 69.95 |
| **A270-10S** 2m/440, 5/5 el, 6.17' boom, 10 db | 99.00 | 89.95 |

### FM VERTICAL STACKING KITS* (Adds 3 db)

| | | |
|---|---|---|
| **A14-SK** Harness only for 2 A148-3S ....Dmwfv | $ 48.00 | 29.95 |
| **A148-VPKS** Stack kit; 2 A148-3S/10S Dmwfcv | 108.00 | 79.95 |
| **A148-SK** Harness only; 2 A148-10S ..Dmwfcv | 48.00 | 44.95 |
| **A449-VPKS** Stack kit; 2 A449-6S/11S .Dmwfv | 65.00 | 59.95 |
| **A449-SK** Harness only; 2 A449-6S/11S Dmwfv | 48.00 | 39.95 |

*Prices are for stacking kits only

## CUSHCRAFT - continued

| | Reg | Sale |
|---|---|---|
| **FM RINGOS - 1/2 Wave Verticals - 3.75 db** | | |
| **AR-10** 10m FM Ringo, 1000w | $ 85.00 | 79.95 |
| **AR-6** 6m FM, 1000w | 71.00 | 64.95 |
| **AR-2** 2m FM, 1000w | 50.00 | 44.95 |
| **AR-220** 220 MHz FM, 500w .....Dmwfcv | 49.00 | 39.95 |
| **AR-450** 440 MHz FM, 500w | 35.00 | 32.95 |
| **AR-270** 2m/440 MHz FM, 250w, 3.7/5.5db | 88.00 | 79.95 |
| **AR-270B** 2m/440 MHz FM base ant | 128.00 | 99.95 |
| **RINGO RANGERS - FM Verticals - 6 db** | | |
| **ARX-6** 6m FM Ringo Ranger | $259.00 | 199.95 |
| **ARX-2** 2m FM Ringo Ranger | 60.00 | 54.95 |
| **ARX-2B** 2m FM Ringo Ranger II, 1000w | 73.00 | 59.95 |
| **ARX-220B** 220 FM Ringo Ranger II, 500w | 73.00 | 64.95 |
| **ARX-450B** 440 FM Ringo Ranger II, 500w | 73.00 | 64.95 |
| **ARX-450BN** 440 Ringo Ranger II/N ...Dmwfcv | 88.00 | 69.95 |
| **HIGH PERFORMANCE 2m/440 VERTICALS** | | |
| **ARX-270N** 2m/440 9/12 db fg type N ant | $310.00 | 249.95 |
| **ARX-270U** 2m/440 9/12 db fg SO-239 ant | 310.00 | 249.95 |
| **FM 4-POLES (less vertical support mast)** | | |
| **AFM-4DA** 2m FM, 23' high, 6/9 db ....Dmwfcv | $148.00 | 99.95 |
| **AFM-24DA** 220 FM, 15' high, 6/9 db ..Dmwcv | 131.00 | 89.95 |
| **TWIST, OSCAR BEAMS (Horiz/Vert Polarization)** | | |
| **A148-20T** 2m 20el 10.8'bm 11.1db twist | $133.00 | 109.95 |
| **22XB** 2m 22el 19.3' bm 14db circ beam/relay | 298.00 | 229.95 |
| **719B** 432 19 el beam | 142.00 | 119.95 |
| **729B** 432 29 el beam | 225.00 | 189.95 |
| **738XB** 432 38el 14.3'bm 15.5db circ w/relay | 276.00 | 219.95 |
| **PS-4** Remote polarity switch .....Dm | 150.00 | 79.95 |
| **PS-4A** Remote polarity switch .....Dmwfcv | 150.00 | 99.95 |
| **BOOMER ANTENNAS** | | |
| **617-6B** 6m Boomer, 6 el, 34' boom, 14 db | $435.00 | 329.95 |
| **124WB** 2m Boomer, 4 el, 4' boom, 10.2 db | 73.00 | 64.95 |
| **13B2** 2m Boomer, 13 el, 15' boom, 15.8 db | 142.00 | 119.95 |
| **17B2** 2m Boomer, 17 el, 31' boom, 18 db | 246.00 | 199.95 |
| **26B2** 2 13B2s vertically stacked | 406.00 | 299.95 |
| **220B** 220 Boomer, 17 el, 19' bm, 17db Dmwf | 192.00 | 129.95 |
| **224WB** 220 Boomer, 4 el, 3' boom, 10.2db | 59.00 | 54.95 |
| **225WB** 220 wideband Boom, 15el, 10'bm, 15.5db | 153.00 | 124.95 |
| **BOOMER STACKING KITS*** | | |
| **617-SK** Harness, pwr divider; 2 6176Bs Dmwf | $160.00 | 89.95 |
| **22-SK** Harness, power divider; 2 13B2s | 100.00 | 89.95 |
| **22N-SK** Harness, pwr divider; 2 17B2s | 165.00 | 129.95 |
| **26B2-VPK** Vertical polar kit; 2 13B2s | 175.00 | 139.95 |
| **220-SK** Harness, pwr divider; 2 220Bs Dmwfv | 98.00 | 59.95 |
| **220-QK** Quad stacking kit for 4 220Bs .....Dw | 390.00 | 99.95 |
| **PD-2** Power divider for 2 13B2s | 49.50 | 44.95 |
| **PD-2N** Power divider for 2 17B2s .....Dmwf | 91.00 | 69.95 |
| **PD-4** Power divider for 4 13B2s | 63.00 | 56.95 |
| **PD-4N** Power divider for 4 17B2s .....Dmw | 113.00 | 79.95 |
| **PD-222** Power divider; 2 220 Boomers .Dmwf | 48.00 | 29.95 |
| **PD-224** Power divider; 4 220 Boomers .Dmwf | 61.00 | 39.95 |
| *Prices are for stacking kits only | | |
| **VHF/UHF BEAMS (Horizontal polarization)** | | |
| **A50-3S** 6m, 3 el, 6' boom, 8 db, stainless hdwre | $110.00 | 99.95 |
| **A50-5S** 6m, 5 el, 12' boom, 10 db, stainless hdwre | 182.00 | 149.95 |
| **A50-6S** 6m, 6 el, 20' boom, 11db, stainless hdwre | 304.00 | 249.95 |

## CUSHCRAFT - continued

| | Reg | Sale |
|---|---|---|
| **A144-7S** 2m, 7 el, 8' boom, 10 db .....Dwfv | 60.00 | 49.95 |
| **A148-10S** 2m, 10 el wideband beam | 85.00 | 79.95 |
| **A430-11S** 430 MHz, 11 el, 4' boom, 13 db | 69.00 | 64.95 |
| **HORIZONTAL STACKING KITS* (Adds 3 db)** | | |
| **A535-SK** For 2 A50-3S/5S .....Dwf | $ 48.00 | 29.95 |
| **A561-SK** For 2 A50-6S .....Dmw | 63.00 | 39.95 |
| **A17-SK** For 2 A144-7S, 79" spacing ...Dmwfv | 48.00 | 29.95 |
| **A41-SK** For 2 A430-11S, 26" spacing .Dmwfv | 48.00 | 29.95 |
| *Prices are for stacking kits only | | |
| **PROJECT GOLD SERIES MOBILE ANTENNAS** | | |
| **CG-144AS** 2m ¾" mt coil & whip only | $114.00 | 99.95 |
| **CG-270AS** 2m/440 ¾" mt coil & whip only | 114.00 | 99.95 |
| **CUSHCRAFT/SIGNALS MOBILE ANTENNAS** | | |
| **CS-28M** 10m magnet mt antenna | $ 66.00 | 59.95 |
| **CS-50** 6m ¾" hole mt 3 db antenna ....Dmwfc | 55.00 | 39.95 |
| **CS-50M** 6m magnet mt 3 db antenna | 66.00 | 59.95 |
| **CS-50T** 6m trunk lip mt 3 db ant .....Dmwfcv | 64.00 | 49.95 |
| **CS-147** 2m ¾" hole mt 3 db antenna Dmwfcv | $ 55.00 | 39.95 |
| **CS-147M** 2m magnet mt 3 db antenna | 66.00 | 59.95 |
| **CS-147T** 2m trunk lip mt 3 db ant ....Dmwfcv | 64.00 | 59.95 |
| **CS-147A** 2m coil & whip only | 44.50 | 39.95 |
| **CS-220** 220 ¾" hole mt 3 db antenna .Dmwfc | 55.00 | 39.95 |
| **CS-220M** 220 magnet mt 3 db antenna | 66.00 | 59.95 |
| **CS-220T** 220 trunk lip mt 3 db ant .....Dmwfc | 64.00 | 49.95 |
| **CS-1450M** 440 ¼ wave mag mt ant ....Dmwfv | 42.00 | 29.95 |
| **CS-450** 440 ¾" hole mt 5 db antenna ...Dmwf | 55.00 | 39.95 |
| **CS-450M** 440 magnet mt 5 db antenna | 66.00 | 59.95 |
| **CS-450T** 440 trunk lip mt 5 db ant .....Dmwfc | 64.00 | 49.95 |
| **CS-450A** 440 coil & whip only .....Dmwfc | 43.00 | 29.95 |
| **CS-270M** 2m/440 3.7/6 db magnet mt ant | 87.00 | 79.95 |
| **CS-270A** 2m/440 coil & whip only | 60.00 | 54.95 |
| **MOUNTS ONLY FOR ABOVE MOBILE ANTENNAS** | | |
| **CS-MG** Magnetic mount | $ 29.95 | |
| **CS-MGN** Magnetic mount w/N connector | 34.95 | |
| **CS-TL** Trunk lip mount | 29.95 | |
| **SKYWALKER HF BEAMS** | | |
| **40-2CD** 40m, 2 el, 23' boom, 5.5 db | $626.00 | 449.95 |
| **20-4CD** 20m, 4 el, 32' boom, 10 db | 665.00 | 469.95 |
| **20-3CD** 20m, 3 el, 20' boom, 8 db | 485.00 | 349.95 |
| **15-4CD** 15m, 4 el, 20' boom, 10 db | 399.00 | 289.95 |
| **15-3CD** 15m, 3 el, 14' boom, 8 db .....Dmwfv | 305.00 | 199.95 |
| **10-4CD** 10m, 4 el, 16' boom, 10 db | 349.00 | 249.95 |
| **10-3CD** 10m, 3 el, 10' boom, 8 db .....Dwv | 232.00 | 149.95 |
| **TEN-3** 10m, 3 el, 8' boom, 8 db | 189.00 | 149.95 |
| **MULTIBAND VERTICAL ANTENNAS** | | |
| **AV-80** 75/80m 36' vertical antenna ..Dmwfcv | $444.00 | 299.95 |
| **AV-3** 20/15/10m 14' vertical .....Dc | 122.00 | 99.95 |
| **AP-8A** 80-10m 8-band ruggedized vertical | 289.00 | 229.95 |
| **APR-18A** Radial kit | 70.00 | 64.95 |
| **R-5** 20/17/15/12/10m half wave vertical .Dfv | 382.00 | 279.95 |
| **R-7** 40/30/20/17/15/12/10m vertical ....Dmw | 510.00 | 329.95 |
| **R-7000** 40/30/20/17/15/12/10m vertical | 510.00 | 379.95 |
| **R-80** 80m kit for R-7000 | 155.00 | 129.95 |
| **ROTATABLE DIPOLES** | | |
| **D-3** 20/15/10m World Ranger dipole | $250.00 | 199.95 |
| **D-3W** 30/17/12m rotatable dipole | 250.00 | 199.95 |

## CUSHCRAFT - continued

| | Reg | Sale |
|---|---|---|
| **D-4** 40/20/15/10m World Ranger dipole | 340.00 | 269.95 |
| **D-40** 40m World Ranger dipole | 305.00 | 239.95 |
| **MULTIBAND BEAM ANTENNAS** | | |
| **A-3S** 20/15/10m, 3el, 14'bm, 8db, stainless hdwre | $497.00 | 349.95 |
| **A-3SDX** 20/15/10m, 3el, transportable beam | 566.50 | 399.95 |
| **A-743** 40m or 10 MHz add-on kit; A-3/A-3S | 159.00 | 129.95 |
| **A-4S** 20/15/10m, 4el, 18'bm, 9db, stainless hdwre | 597.00 | 429.95 |
| **A-744** 40m or 10 MHz add-on kit; A-4/A-4S | 159.00 | 129.95 |
| **A-3WS** 17 & 12m, 3 el, 14' boom, 8 db | 390.00 | 289.95 |
| **A-103** 30m add-on kit for A-3WS | 159.00 | 129.95 |
| **ASL-2010** 13.5-32MHz 8el 18' bm 6.4db LP | 828.00 | 599.95 |
| **AFB-2** 160-10m 9-band balun .....Dmwfcv | 60.00 | 39.95 |
| **LIGHTNING ARRESTORS** | | |
| **LAC-1** SO-239/PL-259 coax arrestor | $ 13.95 | |
| **LAC-2** SO-239/SO-239 coax arrestor | 13.95 | |
| **LAC-4** 200w SO-239 gas tube arrestor | 43.00 | 39.95 |
| **LAC-4H** 2kw SO-239 gas tube arrestor | 48.00 | 44.95 |
| **LAC-4N** 200w type N gas tube arrestor | 55.00 | 49.95 |
| **LAC-4NH** 2kw type N gas tube arrestor | 60.00 | 54.95 |
| **LC-2** Extra 200w cartridge for LAC-4/4N | 19.95 | |
| **LC-2KW** Extra 2kw cartridge for LAC-4H/4NH | 21.95 | |
| **5VB** Vinyl connector boots .....pack of 5 | 13.95 | |

## DCI (DCI)

| | | |
|---|---|---|
| **146-4H** 2m 200w bandpass filter | $ 89.95 | |
| **223.5-3H** 220 200w bandpass filter | 89.95 | |
| **445-10C** 440 200w bandpass filter | 109.95 | |

## DC SALES (DCS)

| | | |
|---|---|---|
| **Tenna Hitch** Antenna mount for trailer hitch | $ 32.95 | |

## DAIWA (DAI)

| | | |
|---|---|---|
| **CS-201** 2-position 600 MHz coax switch | $ 29.95 | |
| **CS-401** 4-position 800 MHz coax switch | 129.95 | 119.95 |
| **CN-101** 1.8-150MHz SWR/power meter/light | 119.95 | 89.95 |
| **CN-103M** 140-525MHz SWR/power meter | 129.95 | 99.95 |
| **CN-410M** 3.5-150MHz 15/150w mob meter | 119.95 | 89.95 |
| **CN-460M** 140-450MHz 15/150w mob meter | 119.95 | 89.95 |
| **CN-465M** 140-450MHz 15/75w mobile meter | 119.95 | 89.95 |
| **DP-810** 1.8-150MHz digital SWR/power | 269.95 | 229.95 |
| **DP-820** 140-525MHz dig type SWR/power | 315.95 | 249.95 |
| **DP-830** 1.8-150/140-525 digital SWR/power | 399.95 | 319.95 |
| **NS-660PA** 1.8-150 30/300/3kw PEP SWR/pwr | 249.95 | 199.95 |

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| 7425 | Wizard III weather station | 195.00 | 169.95 |
| 7440 | Monitor II weather station | 395.00 | 349.95 |
| 7852 | Rain Collector II, 0.01" | 75.00 | 69.95 |
| 7977 | Electronic rain counter, 0.01" | 30.95 | |
| 7859 | External temp/humd Sensor II; 7440 | 125.00 | 109.95 |
| 7862 | Weatherlink IBM interface/software | 165.00 | 139.95 |
| 7866 | Weatherlink Mac interface/software | 165.00 | 139.95 |
| 7867 | Weatherlink IBM conversion kit | 40.95 | |
| 7868 | Weatherlink Mac conversion kit | 40.95 | |
| 7870 | Modem adapter for 7862/7866 | 6.95 | |
| 7873 | Cig lighter power cord | 9.95 | |
| 7876-040 | 4-conductor 40' extension cable | 18.95 | |
| 7878-040 | 6-conductor 40' extension cable | 22.95 | |
| 7880 | 8-conductor 25' junction box cable | 15.95 | |
| 7881 | 8-conductor 50' junction box cable | 25.95 | |
| 7882 | 8-conductor 100' junction box cable | 45.95 | |
| 7890 | Mast mount for anemometer | 16.95 | |
| 0131 | Weather forecasting quick reference card | 9.95 | |
| 0271 | Turbo Meter handheld dig wind indicator | 165.00 | 99.95 |
| 0281 | Wind Wizard handheld wind indicator | 44.95 | |
| 7520 | Stand alone 0.01" rain gauge/elec ctr Dm | 95.00 | 59.95 |

# DELORME (DEL)

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|---|---|---|
| Tripmate | Laptop PC GPS w/Street Atlas soft | $149.95 |

# DIAMOND (DIA)

## SWR/POWER METERS

| | | | |
|---|---|---|---|
| SX-100 | 1.6-60 MHz 30/300/3kw PEP meter | $159.95 | 149.95 |
| SX-200 | 1.8-200 MHz 5/20/200w PEP meter | 119.95 | 109.95 |
| SX-400 | 140-525 MHz 5/20/200w PEP meter | 139.95 | 129.95 |
| SX-600 | Dual band 1.8-160/140-525 200w PEP meter | 199.95 | 179.95 |
| SX-1000 | 1.8-160/430-1300MHz 200w PEP meter | 269.95 | 249.95 |

## HT & HANDHELD SCANNER ANTENNAS

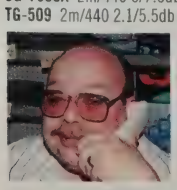
| | | | |
|---|---|---|---|
| RH-3 | 2m/440 1.75" BNC mini HT duck | $ 34.95 | |
| RH-77CA | 2m/440 15" BNC rubber gain ant | 34.95 | |
| RH-205 | 2m ¾ wave telescopic HT antenna | 27.95 | |
| RH-519 | 2m/440 8.3" flexible BNC whip | 34.95 | |
| RH-707 | 2m/440 8½" tiltable BNC whip | 37.95 | |
| RH-951 | 2m/440/1.2GHz 15" BNC duck ..Dmw | 57.95 | 39.95 |
| RH-951S | 2m/440/1.2GHz 15" BNC slim duck | 57.95 | |
| SRH-519 | 2m/440 8.3" flexible SMA whip | 34.95 | |
| SRH-805 | 2m/440/1.2GHz 1.75" SMA ant | 29.95 | |
| SRH-815 | 2m/440/1.2GHz 6" flex SMA whip | 44.95 | |

## MONO-BAND MOBILE ANTENNAS

| | | | |
|---|---|---|---|
| NR-124 | 1.2GHz 8.4db 25" type N mobile ant | $ 66.95 | |
| NR-140A | 220 4db 37" mobile antenna | 60.95 | |
| SG-2000A | 2m 5.2db 62" mobile antenna | 89.95 | |
| SG-6000NMO | 6m 2.15db 39" NMO mobile | 84.95 | |

## DUAL-BAND MOBILE ANTENNAS

| | | | |
|---|---|---|---|
| CR-214S | 2m/220 2.1/3.4db 37" mobile ant | $ 62.95 | |
| CR-224A | 2m/220 5/6db 69" mobile antenna | 109.95 | 99.95 |
| NR-72BNMO | Black 2m/440 2.15db 14" NMO | 46.95 | |
| NR-73BNMO | Blk 2m/440 2.15/5.5db 34" NMO | 62.95 | |
| NR-770HA | 2m/440 3/5.5db 40" mobile ant | 62.95 | |
| NR-770HB | Black 2m/440 3/5.5db 40" mobile | 64.95 | |
| NR-770HNMO | 2m/440 3/5.5db 40" NMO mobile | 64.95 | |
| NR-770HBNMO | Blk 2m/440 3/5.5db 40" NMO | 66.95 | |
| NR-770RA | 2m/440 3/5.5db 39" mobile ant | 62.95 | |
| NR-770SA | 2m/440 2.15db 16.5" mobile ant | 41.95 | |
| NR-790A | 2m/440 4.5/7.2db 57" mobile ant | 94.95 | 89.95 |
| SG-7000A | 2m/440 2.15/3.8db 19" mobile | 73.95 | |
| SG-7200NMO | 2m/440 3.2/5.7db 38" NMO ant | 88.95 | |
| SG-7500A | 2m/440 3.5/6db 41" mobile ant | 86.95 | |
| SG-7500NMO | 2m/440 3.5/6db 41" NMO ant | 88.95 | |
| SG-7900A | 2m/440 5/7.6db 62" mobile ant | 124.95 | 114.95 |
| TG-509 | 2m/440 2.1/5.5db 34" glass m ..Δmv | 199.95 | 129.95 |



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# DIAMOND - continued

## TRI-BAND MOBILE ANTENNAS

| | | | |
|---|---|---|---|
| CR-320A | 2m/220/440 2.15/3.8/5.5db 36" | $ 98.95 | 93.95 |
| CR-627B | 6m/2m/440 2.15/4.5/7.2db 60" ant | 109.95 | 99.95 |
| CR-627BNMO | 6m/2m/440 2.15/4.5/7.2db 60" | 109.95 | 99.95 |
| MV-3A | 10/6/2m 57" UHF base mobile ant | 84.95 | |
| HVC-7 | 40m loading coil for MV-3A | 39.95 | |
| HVC-14 | 20m loading coil for MV-3A | 39.95 | |
| HVC-18 | 17m loading coil for MV-3A | 39.95 | |
| HVC-21 | 15m loading coil for MV-3A | 29.95 | |
| NR-2000NA | 2m/440/1.2 3/6/9.7db 39" N mob | 92.95 | 89.95 |

## MAGNET MOUNTS

| | | | |
|---|---|---|---|
| DP-SPM/58U | Mag mt w/RG-58U; 45" max | $ 43.95 | |
| DPK-4NM-M | Hvy mag mt, Yaesu N, 45" max | 49.95 | |
| DPK-4NM-N | Hvy dty mag mt, cbl, N, 45" max | 49.95 | |
| MCR-M | Mag mt HT base w/coax/tiltable BNC | 44.95 | |
| SPM-35 | Hvy duty mag mt, cable, 45" max | 44.95 | |

## TRUNK LIP MOUNTING KITS

| | | | |
|---|---|---|---|
| K-200 | Folding hatch/tnk mt; NR/SG ants | $ 39.95 | |
| K-200KM | Folding hatch/tnk mt/coax; NR/SG | 69.95 | |
| K-400 | Hatch/trunk mt; NR/SG antennas | 39.95 | |
| K-400C | Hatch/trunk mt w/coax; UHF mount | 69.95 | |
| K-400CNMO | Hatch/trunk mt w/coax; NMO mt | 69.95 | |
| K-400-3/8C | Trunk mount w/6' cable; ⅜-24 | 69.95 | |
| C-110 | 10' extension cable for K-400-3/8C | 14.95 | |
| K-400N | Hatch/trunk mt/coax & type N .....Dfv | 74.95 | 69.95 |
| K-600M | Tilt angle trunk mt w/cable | 69.95 | |
| K-600N | Tilt angle tnk mt w/N/cable .....Dmfc | 74.95 | 59.95 |
| K-600P | Tilt angle trunk mt w/cable, Yaesu N | 72.95 | |
| K-601M | SO-239 hideaway trunk mt, 6' coax | 69.95 | |
| K-601NMO | NMO hideaway trunk mt, 6' coax | 69.95 | |
| C-110 | 10' extension cable for K-601 mts | 14.95 | |

## GUTTER MOUNTS & KITS

| | | | |
|---|---|---|---|
| K-300 | Folding gutter mt; NR/SG antennas | $ 39.95 | |
| K-300C | Gutter mt w/cable; UHF mount | 69.95 | |
| K-300KM | Folding gutter mt w/coax; NR/SG | 67.95 | |
| K-300M | Gutter mt w/coax; NR/SG ants Dmwfc | 79.95 | 59.95 |

## MIRROR & LUGGAGE RACK MOUNTS & KITS

| | | | |
|---|---|---|---|
| K-540 | Mirror/luggage rack mount | $ 39.95 | |
| K-540KM | Mirror/luggage rack mt w/coax | 67.95 | |
| K-550 | Luggage mt; new mini vans (use GLP) | 49.95 | |
| K-550KM | Luggage mt w/SO-239 base/coax | 69.95 | |

## MOUNTING GROUP HARDWARE

| | | | |
|---|---|---|---|
| C-101 | SO-239 mt, 6.5' RG-316 low-loss coax | $ 29.95 | |
| C-110 | 10' ext cable; C-101/K-601/K-400-3/8C | 14.95 | |
| C-211 | SO-239 mt, 6.5' coax, 10' coax entend | 39.95 | |
| GLP-5 | UHF base mtg group hrdwr; mini coax | 10.95 | |
| GLP-5N | UHF mtg grp hrdwr; mini coax, Yae N | 13.95 | |
| GLP-58 | UHF base mounting group hardware | 10.95 | |
| NMO-UHF | Adapter to NMO; not for SG, 45" max | 23.95 | |

## MONO-BAND BASE STATION ANTENNAS

| | | | |
|---|---|---|---|
| DP-GH62 | 6m 6db 21' base antenna | $157.95 | 147.95 |
| F-22A | 2m 6.7db 10.5' base antenna | 114.95 | 104.95 |
| F-22J | 143.5-146.5MHz 6.7db 10.5' base ant | 114.95 | 104.95 |
| F-23A | 2m 7.8db 15' base antenna | 172.95 | 162.95 |
| F-23C1 | 148-154MHz 7.8db 15' comm base | 183.95 | 159.95 |
| F-23J | 143.5-146.5MHz 7.8db 15' base ant | 172.95 | 162.95 |
| F-142A | 220 MHz 5.5db 6' base antenna | 136.95 | 124.95 |
| F-718A | 440 11.5db 15' type N base antenna | 246.95 | 226.95 |
| F-718C2 | 460-472MHz 11.5db 15' N comm | 261.95 | 239.95 |
| F-718J | 428-442MHz 11.5db 15' N base ant | 246.95 | 226.95 |
| F-718L | 420-430MHz 11.5db ATV N base ant | 246.95 | 219.95 |
| F-1230A | 1.2GHz 13.5db 10.5' type N base ant | 178.95 | 164.95 |

## DUAL-BAND BASE STATION ANTENNAS

| | | | |
|---|---|---|---|
| U-200 | 440/1.2GHz 8.3/11.7db 6' N base ant | $141.95 | 129.95 |
| U-300A | 440/1.2GHz 8.6/13.2db 8.3' N base ant | 178.95 | 159.95 |
| X-50A | 2m/440 4.5/7.2db 5.6' base antenna | 125.95 | 115.95 |
| X-200A | 2m/440 6/8db 8.3' base antenna | 167.95 | 157.95 |
| X-300A | 2m/440 6.5/9db 10.2' base ant | 183.95 | 173.95 |
| X-500HNA | Hvy duty 2m/440 8.3/11.7db 17.8' N ant | 269.95 | 249.95 |
| X-510MA | 2m/440 8.3/11.7db 17.2' base ant | 219.95 | 199.95 |
| X-510NA | 2m/440 8.3/11.7db 17.2' type N ant | 219.95 | 199.95 |
| X-510NJ | 143.5-146.5/428-442MHz 17.2' N | 219.95 | 189.95 |
| X-700HA | 2m/440 9.3/13db 24' base .....Dmfv | 439.95 | 369.95 |
| X-700HNA | 2m/440 9.3/13db 24' type N ant | 439.95 | 399.95 |
| X-2200A | 2m/220 6/7.8db 11.5' base ant | 183.95 | 173.95 |

# DIAMOND - continued

## TRI-BAND BASE STATION ANTENNAS

| | | | |
|---|---|---|---|
| D-130J | 25-1300 MHz 200w discone ant | $101.95 | 94.95 |
| U-5000A | 2m/440/1.2GHz 4.5/8.3/11.7db 6' N | 167.95 | 157.95 |
| V-2000A | 52-54MHz/2m/440 2.1/6.2/8.4db 8.3' | 172.95 | 162.95 |
| X-3200A | 2m/220/440 6/7.8/8db 10' base | 241.95 | 221.95 |
| X-6000A | 2m/440/1.2 6.5/9/10db 10.5' N | 219.95 | 199.95 |

## DUPLEXERS & TRIPLEXERS

| | | | |
|---|---|---|---|
| MX-37 | HF-440/1.2 100/50w N duplexer | $ 74.95 | |
| MX-37N | HF-440/1.2 100/50w N dplxr .Dmwfcv | 60.95 | 49.95 |
| MX-62M | HF-6m/2m, 12" cables duplexer | 77.95 | |
| MX-72D | HF-2m/440 400/150/100w duplexer | 52.95 | |
| MX-72DN | As MX-72D, w/type N on 440 | 52.95 | |
| MX-72H | As MX-72D, w/12" cables | 58.95 | |
| MX-72N | As MX-72D, type N on 440, 12" cables | 58.95 | |
| MX-214 | 2m/220 150/100w w/12" cables | 73.95 | |
| MX-214D | As MX-214, no cables | 73.95 | |
| MX-324 | 2m/220/440 triplexer | 99.95 | 94.95 |
| MX-324D | As MX-324, no cables | 99.95 | 94.95 |
| MX-2000 | HF-6m/2m/440 400/400/250w triplexer | 94.95 | 89.95 |
| MX-2000D | As MX-2000, no cables | 99.95 | 94.95 |
| MX-3000 | HF-2m/440/1.2 400/200/100w triplexer | 94.95 | 89.95 |
| MX-3000D | As MX-3000, no cables | 89.95 | |
| MX-3000DN | As MX-3000, N on 440, 1.2 ... Dv | 89.95 | 79.95 |
| MX-3000N | As MX-3000, type N, 12" cables | 94.95 | 89.95 |

## ACCESSORIES

| | | | |
|---|---|---|---|
| CA-35R | DC-500MHz 400w lightning protect | $ 36.95 | |
| CX-210A | 1.5kw DC-1000MHz coax switch | 51.95 | |
| CX-210N | 1.5kw DC-1500MHz N coax switch | 93.95 | 89.95 |
| DL-30A | 15/100w peak 0-500MHz dummy load | 33.95 | |
| HB-100 | Desk mount bracket for HT .....Δmf | 44.95 | 29.95 |
| HB-400 | HT air vent dash mount | 19.95 | |
| HB-450 | HT adjustable air vent dash mount | 69.95 | |
| HB-500 | Remote head air vent dash mount | 22.95 | |
| HB-650 | HT door mt; side window/glove box | 69.95 | |

# Diamond Systems (DSY)

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| DSI-IBM-N | Novice Class License software | $ 49.95 | 39.95 |
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| DSI-IBM-NC | No Code Tech Class License software | 59.95 | 49.95 |
| DSI-IBM-G | General Class License software | 44.95 | 34.95 |
| DSI-IBM-A | Advanced Class License software | 59.95 | 49.95 |
| DSI-IBM-E | Extra Class License software | 59.95 | 49.95 |

# DIGIMAX (DIG)

| | | | |
|---|---|---|---|
| D-500 | 512 MHz 8-digit counter - 1 PPM | $149.95 | 139.95 |
| D-510A | 1 GHz 8-digit counter - 1 PPM | 179.95 | 159.95 |
| D-612 | 1.2 GHz 9-digit counter - .1 PPM | 259.95 | 229.95 |
| D-1200 | 1.2 GHz 9-dig .1 PPM ctr/audio mult | 299.95 | 269.95 |
| AC-12 | 12vdc adaptor | 8.95 | |
| AM-12 | 10X/100X audio multiplier .....Δwf | 39.95 | 9.95 |
| B-12 | Dry cell holder, switch for D-612 | 10.95 | |
| BAC-5 | Nicad batt pack for D-500/D-510A | 29.95 | |
| BAC-12 | Nicad batt pack; D-612/D-1200 | 34.95 | |
| RF-500X | Inline RF sampler, 250w maximum | 39.95 | |
| T-1200 | 21" BNC telescopic antenna | 8.95 | |

# DRAKE (DRA)

| | | | |
|---|---|---|---|
| TR-270 | 25w 2m FM Xcvr/ps/440 rcvr/TTP | 1399.95 | |
| DEMOD-270 | Multimode demodulator kit | 99.95 | |
| TNC-270 | 9600 bps terminal node controller | 249.95 | |
| R-8A | Shortwave receiver | 1099.00 | 1079.95 |
| MS-8 | 1592 Speaker | 49.95 | |
| 1590 | 35-55, 108-174 MHz VHF converter | 219.95 | |
| 7851 | R-8A technical manual | 39.95 | |
| 1591 | Interface computer soft; R-8 .....Dmwfv | 59.00 | 29.95 |
| SW-8 | Shortwave receiver | 799.95 | |
| 1595 | Carrying case for SW-8 | 49.95 | |
| SW-1 | Shortwave receiver .....† | 299.00 | 269.95 |
| SW-2 | Shortwave receiver | 499.95 | |
| MS-8 | 1592 Speaker for SW-2 | 49.95 | |
| 1334 | Mobile mount kit for SW-1/SW-2 | 15.95 | |
| 1594 | Remote control for SW-2 | 49.95 | |
| 2051 | Tilt/carry handle for SW-1/SW-2 | 4.95 | |

# EDCO (EDC)

| | | |
|---|---|---|
| TX-146 | 2m 50w 40db 3-stage helical filt .Dm | $ 89.95 59.95 |

# EIMAC TRANSMITTING TUBES (EIM)

| | | |
|---|---|---|
| 3CX800A7 | .....special order | $469.95 |

## EIMAC - continued

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| 3CX1200A7 | special order | 669.95 | |
| 4CX250B/7203 | special order | 159.95 | |
| 8873 | special order | 489.95 | |
| 8874/3CX400A7 | special order | 469.95 | |
| 8875 | special order | 599.95 | |
| 8877/3CX1500A7 | special order | 1099.95 | |

**ALSO see TUBES**

## FORBES GROUP (FOR)

| | | | |
|---|---|---|---|
| VT-14 | 2m Ventenna 3' 2.6 db base ant | $ 49.95 | |
| VT-22 | 220 Ventenna 25" 2.6 db base ant | 49.95 | |
| VT-27 | 2m/440 Ventenna base antenna | 74.95 | |
| VT-44 | 440 Ventenna 14" 2.6 db base ant | 49.95 | |
| VT-15S | Scanner Ventenna 3' 2.6 db base | 49.95 | |

## Gamber-Johnson (GAM)

| | | | |
|---|---|---|---|
| SS-100 | Super slide mount w/ant plug | $100.22 | 69.95 |
| SS-101 | Extra base for SS-100 | 42.95 | |

## GAP VERTICALS (GAP)

| | | | |
|---|---|---|---|
| DX-VIII | Challenger 80/40/20/15/12/10/6/2m 31.5' | $259.95 | |
| | Challenger Counterpoise | 25.95 | |
| | (SYN) 100' 1/2" black double braided rope | 6.95 | |
| DX-VI | Eagle 40/20/17/15/12/10m 21.5' rigid | 269.95 | |
| DX-IV | Voyager 160/80/40/20m 45'; use 350' guy | 399.95 | |
| | Voyager Counterpoise | 50.95 | |
| | (SYN) 350' 3/16" black double braided rope | 39.95 | |
| Titan DX | 80/40/30/20/17/15/12/10m, 25' | 299.95 | |
| 100' Guy Kit | with clamp | 14.95 | |
| 200' Guy Kit | with clamp | 22.95 | |

## GARMIN (GAR)

| | | | |
|---|---|---|---|
| GPS-12XL | GPS receiver | $386.35 | 299.95 |
| GPS-38 | GPS receiver | 231.80 | 179.95 |

## GENESYS (GEN)

| | | | |
|---|---|---|---|
| ADP-1 | Chrome NMO to SO-239 adapt ..Δmwf | $ 17.95 | |
| B-27 | 2m/440 7" duck ..Δmwv | 19.95 | 14.95 |
| B-35 | 2m/440 15" duck ..Δmwv | 27.95 | |
| CT-221E | Eartalk mic/amp/gain controls ....Dc | 84.95 | 69.95 |
| CT-221ME | Eartalk w/split plugs ..Dw | 84.95 | 69.95 |
| ET-Mark II | Eartalk; Ali/Ico/Sta/Yae ..Δmv | 84.95 | 69.95 |
| G-1 | 43" 3/6db 2m/440 base antenna ..Δc | 99.95 | 89.95 |
| NMO Mount | NMO mount w/16' mount ...Δwfv | 10.95 | 9.95 |
| PO Mount | SO-239 mount w/16' coax ..Δfcv | 17.95 | 14.95 |
| QS-110 | Spkr/mic; Alinco/Icom/Yaesu ....Δmw | 29.95 | 24.95 |
| QS-110K | Speaker/mic for Kenwood ..Δmwfcv | 29.95 | 19.95 |
| RS-402 | 5/20/200w 125-525 SWR/pwr Δmwcv | 139.95 | 99.95 |
| SY-25D | VHF/UHF duplexer ..Δwv | 34.95 | 29.95 |
| T-05 | Throat mic with split plugs ..Δmwv | 84.95 | 69.95 |
| T-05K | Throat mic for Kenwood ..Δmwfcv | 84.95 | 69.95 |
| T-05M | Throat mic for Motorola ..Δmv | 92.95 | 59.95 |

## GLEN MARTIN (GME)

| | | |
|---|---|---|
| RT-424 | 4.5' roof-top tower, 6 sq ft 85 mph | $159.95 |
| RT-832 | 8' roof-top tower, 8 sq ft 85 mph | 229.95 |
| RT-936 | 9' roof-top tower, 18 sq ft 85 mph | 389.95 |
| RT-1832 | 17.5' roof-top tower, 12 sq ft 85 mph | 524.95 |
| LB-3755 | Set of 8 3/8 x 5" lag bolts | 9.95 |
| RA-6024 | 24" side arm for roof tower | 59.95 |
| RA-6048 | 48" side arm for roof tower | 76.95 |
| M-1330A | 30' alum twr 12 sq ft/Hazer/10' mast T | 1615.95 |
| M-1340A | 40' alum twr 12 sq ft/Hazer/10' mast T | 1832.95 |
| M-1840A | 40' alum twr 16 sq ft/Hazer/10' mast T | 2150.95 |
| M-1850A | 50' alum twr 16 sq ft/Hazer/10' mast T | 2410.95 |
| M-1860A | 60' alum twr 15 sq ft/Hazer/10' mast T | 3356.95 |
| M-1870A | 70' alum twr 15 sq ft/Hazer/10' mast T | 3660.95 |
| LR-8400 | Lightning rod kit (complete) | 148.95 |
| CW-2540 | 25' #4 bare copper ground wire | 19.95 |
| CW-5040 | 50' #4 bare copper ground wire | 38.95 |
| CW-7540 | 75' #4 bare copper ground wire | 57.95 |
| CW-1040 | 100' #4 bare copper ground wire | 76.95 |
| CW-1240 | 125' #4 bare copper ground wire | 95.95 |
| CW-1540 | 150' #4 bare copper ground wire | 115.95 |
| MC-10 | Mast clamp; 2 required | 24.95 |
| ES-40 | 4" dia x 30" earth screw | 15.95 |
| ES-60 | 6" dia x 48" earth screw | 25.95 |
| ES-80 | 8" dia x 66" earth screw | 57.95 |
| GR-4400 | Ground rod wire clamp | 6.95 |
| GR-5080 | 8' x 5/8" ground rod | 19.95 |

## GLEN MARTIN - continued

| | | Reg | Sale |
|---|---|---|---|
| H-2 | 175 lb load 12 sq ft HD aluminum Hazer | 359.95 | |
| H-3 | 150 lb load 8 sq ft std aluminum Hazer | 269.95 | |
| H-4 | 200 lb load 16 sq ft galv steel Hazer | 344.95 | |
| HR-6010 | T²X plates for H-2/4/5/6 | 21.95 | |
| M-1049 | 9' 1.92" OD galv steel mast | 58.95 | |
| MA-1049 | 9' 1.92" OD aluminum mast | 68.95 | |
| MA-1050 | 5' 1.92" OD aluminum mast | 55.95 | |
| MA-2069 | 9' 2.376" OD aluminum mast | 99.95 | |
| MA-5050 | 5' 1.33" OD aluminum mast | 36.95 | |
| ML-1800 | Messenger line kit; Glen Martin towers | 69.95 | |
| ML-2500 | Messenger line kit; Rohn towers | 69.95 | |
| TB-25 | Thrust bearing (2 sealed bearings) | 89.95 | |
| TL-0470 | Terminal lug | 2.95 | |
| VH8-50 | Hazer - for 50' Rohn 45G | 1230.95 | |
| VH8-60 | Hazer - for 60' Rohn 45G | 1350.95 | |
| VH8-70 | Hazer - for 70' Rohn 45G | 1455.95 | |
| VH9-50 | Hazer - for 50' Rohn 55G | 1265.95 | |
| VH9-60 | Hazer - for 60' Rohn 55G | 1385.95 | |
| VH9-70 | Hazer - for 70' Rohn 55G | 1490.95 | |

**All GLEN MARTIN items are shipped PREPAID (Glen Martin's expense) direct to you from the factory (48 states). We prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your order. Please allow sufficient delivery time. Most truck lines will not unload towers, so please be sure to have enough manpower and/or equipment on hand.**

## L.L. GRACE (GRA)

| | | |
|---|---|---|
| KCT | Kansas City Tracker satellite package | $229.95 |
| KCT/T | Kansas City Tracker package/KC Tuner | 319.95 |

## GROVE (GRV)

| | | | |
|---|---|---|---|
| ANT-20 | No-Tenna Inside car receiving ant | $ 19.95 | |

## GRUNDIG (GRU)

| | | | |
|---|---|---|---|
| Cosmopolit | Port AM/FM/SW/LW Rcvr ..Df | $249.95 | 129.95 |
| Yacht Boy 230 | Port AM/FM/SW/LW Rcvr ... Dmf | 199.95 | 79.95 |
| Yacht Boy 235 | Port AM/FM/SW/LW Rcvr ..Dv | 159.95 | 79.95 |
| Traveller II | Port AM/FM/SW/LW Rcvr/clock | 89.95 | 69.95 |
| Yacht Boy 305 | Port AM/FM/SW/LW Rcvr | 149.95 | 119.95 |
| Yacht Boy 400 | Port AM/FM/SW/LW Rcvr | 219.95 | 189.95 |

## HAL (HAL)

| | | | |
|---|---|---|---|
| DSP-4100 | HF DSP modem | 1295.00 | 1099.95 |
| P-38 | HF DSP modem | 395.00 | 349.95 |
| PCI-4000/M | Multi-mode clover unit; IBM ....m | 795.00 | 699.95 |
| ST-8000 | HF modem ..special order | 3495.00 | 3269.95 |

## HEIL (HEI)

| | | | |
|---|---|---|---|
| PRO-SET-4 | Deluxe boom mic/headset/HC-4 | $131.95 | |
| PRO-SET-5 | Deluxe boom mic/headset/HC-5 | 131.95 | |
| PRO-MICRO-4 | Boom mic/headset/HC-4 | 105.95 | |
| PRO-MICRO-5 | Boom mic/headset/HC-5 | 105.95 | |
| PRO-5-4 | Boom mic/single headset (HC-4) | 120.95 | |
| PRO-5-5 | Boom mic/single headset (HC-5) | 120.95 | |
| AD-1-I | Pro-Set 8-pin adapter cord for Icom | 14.99 | |
| AD-1-K | Pro-Set 8-pin adapt cord; Kenwood | 14.99 | |
| AD-1-T | Pro-Set 8-pin adapt cord; Ten-Tec | 14.99 | |
| AD-1-Y | Pro-Set 8-pin adapter cord; Yaesu | 14.99 | |
| AD-1-I-M | Pro-Set modular adapt cord; Ico | 14.99 | |
| AD-1-K-M | Pro-Set modular adapt cord; Ken | 14.99 | |
| AD-1-Y-M | Pro-Set modular adapt cord; Yae | 14.99 | |
| BM-5-4 | Boom mic/single headset (HC-4) ....Dwf | 64.90 | 44.95 |
| BM-5-5 | Boom mic/single headset (HC-5) ..Dwf | 64.90 | 44.95 |
| BM-5-4-I | Bm mic/sgl headset; Icom (HC4) .... Dv | 69.90 | 49.95 |
| BM-5-4-Y | Bm mic/sgl headset; Yaesu (HC4) ..Dmv | 69.90 | 49.95 |
| FS-1 | Foot switch | 26.95 | |
| HS-1 | Hand switch | 20.95 | |
| HC-4 | DX'ers 'dream machine' mic element | 29.95 | |
| HC-5 | Mic element for Icom SM-5/SM-6 | 29.95 | |
| HM-10-4 | Microphone with HC-4 element | 63.96 | |
| HM-10-5 | Microphone with HC-5 element | 63.96 | |
| HM-10-Dual | Mic w/HC-4 & HC-5 elements | 112.96 | |
| CC-1-I | HM-10 cable for Icom | 25.99 | |
| CC-1-K | HM-10 cable for Kenwood | 25.99 | |
| CC-1-Y | HM-10 cable for Yaesu | 25.99 | |
| MA-1 | Clamp and arm for HM-10 | 49.99 | |

## HEIL - continued

| | | Reg | Sale |
|---|---|---|---|
| TB-1 | Table base mic stand for HM-10 | 19.95 | |
| Boom Clip | for BM-series | 5.95 | |
| Ear Pads | for BM-series ..pair | 5.95 | |
| Ham Radio Handbook | | 12.95 | |

## HUSTLER (HUS)

| | | | |
|---|---|---|---|
| RM-80 | 80m CW 400w PEP resonator | $ 26.95 | |
| RM-75 | 75m phone 400w PEP resonator | 26.95 | |
| RM-40 | 40m 400w PEP resonator | 24.95 | |
| RM-30 | 30m 400w PEP resonator | 24.95 | |
| RM-20 | 20m 400w PEP resonator | 21.95 | |
| RM-17 | 17m 400w PEP resonator | 21.95 | |
| RM-15 | 15m 400w PEP resonator | 15.95 | |
| RM-12 | 12m 400w PEP resonator | 15.95 | |
| RM-11 | 11m 400w PEP resonator | 15.95 | |
| RM-10 | 10m 400w PEP resonator | 15.95 | |
| RM-80S | 80m CW 2kw PEP resonator | 49.95 | |
| RM-75S | 75m phone 2kw PEP resonator | 49.95 | |
| RM-40S | 40m 2kw PEP resonator | 35.95 | |
| RM-20S | 20m 2kw PEP resonator | 28.95 | |
| RM-15S | 15m 2kw PEP resonator | 24.95 | |
| RM-11S | 11m 2kw PEP resonator | 23.95 | |
| RM-10S | 10m 2kw PEP resonator | 23.95 | |
| MO-1 | 54" mast for fender or deck mount | 31.95 | |
| MO-2 | 54" mast for bumper mount | 31.95 | |
| MO-3 | 54" no break-over mast | 23.95 | |
| MO-4 | 22" mast for special applications | 19.95 | |
| VP-1 | Tri-band adapter | 5.95 | |
| RSS-2 | Resonator spring | 9.95 | |
| QD-2 | Stainless quick disconnect | 19.95 | |
| L-14-144 | 12' RG-58, PL-259 to lugs | 9.95 | |
| L-14-240 | 20' RG-58, PL-259 to lugs | 12.95 | |
| LU-216 | 18' RG-58, PL-259s both ends ..Df | 13.95 | 7.95 |

### STAINLESS 2" MOBILE BALL MOUNTS

| | | | |
|---|---|---|---|
| SSM-1 | Ball & spring, cadmium hardware | $ 46.95 | |
| SSM-2 | Ball, cadmium hardware | 26.95 | |
| SSM-3 | Stainless steel spring | 24.95 | |

### 1-1/2" MOBILE BALL MOUNTS

| | | | |
|---|---|---|---|
| C-32 | Chrome plated ball | $ 11.95 | |
| C-30 | Chrome plated spring | 11.95 | |
| C-29 | Stainless steel spring | 17.95 | |
| BM-1 | Single strap bumper mt w/C-32 | 21.95 | |

### 3/8-24 THREAD MOBILE MOUNTS

| | | | |
|---|---|---|---|
| HLM | Trunk lip mount w/swivel | $ 22.95 | |
| HOT | Hustloff trunk lip mt w/swivel | 23.95 | |
| MBM | Super magnet mount w/16' coax | 19.95 | |
| MM-3 | Universal mount with 17' coax | 21.95 | |
| RVM | Recreational vehicle mount | 20.95 | |
| TGM-1 | Trunk grove mount | 12.95 | |
| TLM | Trunk lip mount | 21.95 | |

### HF ANTENNAS

| | | | |
|---|---|---|---|
| 4-BTV | 40/20/15/10m 21' trap vertical | $166.95 | 119.95 |
| 5-BTV | 80/40/20/15/10m 25' trap vertical | 211.95 | 149.95 |
| 30-MTK | 30m trap kit for 4-BTV/5-BTV | 41.95 | |
| 6-BTV | 80/40/30/20/15/10m 24' trap vert | 246.95 | 169.95 |

### VHF BASE STATION ANTENNAS

| | | | |
|---|---|---|---|
| G6-144B | 2m 6 db 10' vertical antenna | $149.95 | 114.95 |
| G6-270R | 2m/440 6db 7.6' base station ant | 208.95 | 159.95 |
| G7-144 | 2m 7 db 15' vertical antenna | 208.95 | 159.95 |
| G7-220 | 220 MHz 7 db 10' vertical antenna | 199.95 | 149.95 |
| G6-440 | 440 MHz 6 db 7' vertical antenna | 186.95 | 139.95 |

### SPIRIT VHF/UHF BASE ANTENNAS (Special Order)

| | | | |
|---|---|---|---|
| HSU-14448 | 2m unity gain base antenna ...*T | $400.00 | 219.95 |
| HS3-14448 | 2m 3db base antenna ..*T | 495.00 | 319.95 |
| HD6-14448 | 2m 6db base antenna ..*T | 833.00 | 629.95 |
| HS6-43050 | 430-450MHz 6 db base ant ....*T | 697.00 | 379.95 |
| HD9-43050 | 430-450MHz 9 db base ant ....*T | 882.00 | 499.95 |
| HS6-12430 | 1.2GHz 6 db base antenna ....*T | 485.00 | 319.95 |
| HS9-12430 | 1.2GHz 9 db base antenna ....*T | 766.00 | 419.95 |
| HS12-12430 | 1.2GHz 12 db base antenna ..*T | 965.00 | 529.95 |

***Specify exact frequency and height above ground that the Spirit antenna will be mounted above surrounding terrain. These antennas**

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## HUSTLER - continued

| | Reg | Sale |
|---|---|---|

are drop-shipped (shipped direct to you from the Hustler factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Mineral Wells, Texas via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order antennas.

### VHF MOBILE ANTENNAS

| | | |
|---|---|---|
| **BBL-144A** 2m FM ¾" hole mt antenna, 3.4db | $ 39.95 | |
| **BBLT-144A** 2m FM trunk lip mt ant, 3.4 db | 47.95 | |
| **CG-144** 2m FM ⅝-24 ant, 7' high, 5.2 db | 31.95 | |
| **CGT-144** 2m FM trunk mt ant, 7' high, 5.2db | 51.95 | |
| **CG-220** 220 FM ⅝-24 antenna, 5.2 db | 31.95 | |
| **CGT-220** 220 MHz 5.2 db tnk mt ant ..Δmwfv | 51.95 | 29.95 |
| **FX-2** 2m FM 3.4 db magnetic mt antenna | 33.95 | |
| **FX-2B** 2m FM 3.4 db black mag mt antenna | 38.95 | |
| **FX-220** 220 FM 3.4 db magnetic mt ant | 33.95 | |
| **FX-220B** 220 FM 3.4 db black mag mt ant | 38.95 | |
| **MKR-2** Radial kit for SF-2/CG-144 | 20.95 | |
| **RX-2** 2m FM 3.4db magnetic mount ant | 24.95 | |
| **RX-220** 220 FM 3.4db magnetic mt antenna | 24.95 | |
| **RX-440** 440 FM 5 db magnetic mt antenna | 24.95 | |
| **SF-2** 2m FM ⅝-24 ant, 4' high, 3.4 db | 14.95 | |
| **SF-220** 220 MHz ⅝-24 antenna, 3 db | 14.95 | |
| **THF** 140-500 MHz ¼ wave trunk mount ant | 23.95 | |
| **UGM** 140-500 MHz ¼ wave BNC mag mt ant | 21.95 | |
| **UHT-1** 140-500 MHz ¼ wave roof mt ant | 14.95 | |

# HY-GAIN (HYG)

### TRI-BAND BEAMS (20-15-10m)

| | | |
|---|---|---|
| **398S** TH11DXS 11el 20/17/15/12/10m, 24' bm | 1079.95 | 899.95 |
| **391S** TH7DXS 7 el, 24' boom w/balun | 811.95 | 689.95 |
| **393S** TH5Mk2S 5 el, 19' boom w/balun | 696.43 | 589.95 |
| **395S** Explorer 14 4 el, 14' boom w/balun | 538.95 | 459.95 |
| **396S** QK-710 10MHz or 40m EX add-on | 165.95 | 154.95 |
| **388S** TH3Mk4 3 el, 14' boom | 433.95 | 369.95 |
| **221S-1** TH3JRS 3 el, 12' boom, 750w PEP | 324.95 | 289.95 |
| **390S** TH2Mk3S 2 el, 6' boom | 337.95 | 279.95 |
| **DB-1217** 12/17m 14' boom beam ....m | 401.95 | 339.95 |

### MONOBAND BEAMS

| | | |
|---|---|---|
| **371S** Discoverer 7-1 30m or 40m rotatable dipole | $263.95 | 229.95 |
| **372S** Discoverer 7-2 40m 2 el 23' boom | 601.95 | 509.95 |
| **373S** Discoverer 7-3 3rd el; 372S; 35' boom | 371.95 | 314.95 |
| **377S-1** 205CA 20m 5 el, 34' boom ....T | 661.95 | 559.95 |
| **394S** 204BAS 20m 4 el, 26' boom | 481.95 | 399.95 |
| **226S** 203BAS 20m 3 el, 16' boom | 292.95 | 249.95 |
| **376S** 155B/CAS 15m 5 el, 26' boom | 380.95 | 319.95 |
| **236S** 153BAS 15m 3 el, 12' boom | 182.95 | 169.95 |
| **375S** 105B/CAS 10m 5 el, 24' boom | 251.95 | 229.95 |
| **239S-1** 103BAS 10m 3 el, 8' boom | 131.95 | 124.95 |
| **1009AA** LP-1009AA 13-30 MHz 12 el LP Δm | 1321.95 | 1049.95 |
| **1010AA** LP-1010AA 10-30 MHz 14 el LP .Δm | 1872.95 | 1499.95 |

### MULTI-BAND VERTICALS

| | | |
|---|---|---|
| **188S** DX-88 80-10m 8-band 25' vert | $346.95 | 299.95 |
| **189S** GRK-88 Ground radial kit | 81.95 | |
| **190S** RRK-88 Roof radial kit | 99.88 | |
| **191S** 160MK-88 160m kit for 188S | 178.95 | 159.95 |
| **DX-77** 40-10m 750w 7-band 29' no radials vert | 421.95 | 359.95 |
| **182S** 18HTS Hy-Tower 5-band, 50' high ....T | 739.95 | 629.95 |
| **LC-160Q** 160m loading coil for Hy-Tower | 94.95 | |
| **385S** 14AVQ/WBS 40/20/15/10m, 18' | 159.95 | 144.95 |
| **384S** 12AVQS 20/15/10m, 13.5' high | 114.95 | 104.95 |
| **184** 14RMQ Roof kit-12/14AVQ.18AVT Δmwfcv | 71.95 | 49.95 |
| **193S** 18VS 80-10m trapless vert, 18' high | 74.95 | 69.95 |

### MULTI-BAND DOUBLETS

| | | |
|---|---|---|
| **380S** 2BDQS 80/40m 101' trap doublet | $120.95 | 109.95 |
| **383S** 5BDQS 80/40/20/15/10m 94' trap Δmwfv | 235.95 | 169.95 |
| **381S** 19PD 80-10m 233' 1-band port dipole | 263.95 | 224.95 |

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## HY-GAIN - continued

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|---|---|---|

### VHF/UHF BASE STATION ANTENNAS

| | | |
|---|---|---|
| **343S** 66DX 6m 6 el beam, 24' boom | $231.95 | 209.95 |
| **230S-1** 64DX 6m 4 el beam, 12' boom | 122.95 | 109.95 |
| **232S** 215DX 2m 15 el beam, 28' boom Δmwfv | 206.95 | 149.95 |
| **214S-1** 214FM 2m 14 el beam, 15' boom | 81.95 | |
| **208S-1** 28FM 2m 8 el beam, 12' boom | 71.95 | |
| **205S-1** 25FM 2m 5 el beam, 6' boom | 51.95 | |
| **203S-1** 23FM 2m 3 el beam, 3.5' boom | 41.95 | |
| **231S** 70-31DX 430 31 el beam, 24' boom | 203.95 | 184.95 |
| **V-6R** 6m 3db deluxe base antenna | 189.95 | 174.95 |
| **338** GPG2B 2m ground plane ant | 43.95 | |
| **331S** V-42R 2m/440 type N base ant | 154.95 | 139.95 |
| **335S-1** V-2R 2m ground plane ant | 99.95 | 92.95 |
| **V-3R** 220 ground plane antenna | 101.95 | 94.95 |
| **337S-1** V-4R 440 ground plane ant | 97.95 | 89.95 |

### OSCAR LINK ANTENNAS

| | | |
|---|---|---|
| **216S** 216SAT 2m 16el 145.9MHz bm ....Δwfv | $218.95 | 159.95 |
| **215S** 7030SAT 435 MHz 30 el beam .....Δwfv | 211.95 | 149.95 |
| **217** 60" x 1½" fiberglass crossboom ..Δmwfv | 71.95 | 49.95 |
| **218S** OSCAR Link Complete Oscar ant sys | 487.95 | 409.95 |

### ACCESSORIES

| | | |
|---|---|---|
| **155** CI Center insulator for doublets | $ 12.95 | |
| **156** EI 7" doublet end insulators .....pair | 6.95 | |
| **157S** CIC Dipole center insulator w/SO-239 | 23.95 | |
| **242S** BN-86 80-10m balun | 36.95 | |
| **243S** BN-4000B 4kw PEP 160-10m beam balun | 93.95 | 89.95 |
| **244S** BN-4000D 4kw PEP 160-10m dipole balun | 93.95 | 89.95 |
| **245S** BN-4000N 4kw PEP 80-10 N beam balun Δw | 105.95 | 79.95 |
| **2400-155** 62400155 Contester bm mic/headset | 113.95 | 99.95 |

### HY-GAIN CRANK-UP TOWERS

| | | |
|---|---|---|
| **129-1** HG-37SS 37' self-supporting tower ..T | 1557.95 | 1299.95 |
| **125-1** HG-52SS 52' self-supporting tower ..T | 2565.95 | 2129.95 |
| **130-1** HG-54HD 54' hvy duty self-support ..T | 3171.95 | 2629.95 |
| **131-1** HG-70HD 70' hvy duty self-support ..T | 4574.95 | 3799.95 |
| **116** HG-5 5' 2" OD .120 wall steel mast | 79.95 | |
| **117** HG-10 10' 2" OD .120 wall steel mast †Tw | 102.95 | 49.95 |
| **118** HG-15 15' 2" OD .120 wall steel mast .T | 165.95 | 154.95 |
| **121B** HG-TBT Thrust bearing w/sleeve | 88.95 | |
| **122** HG-COA Coax arm*, tower legs 1"-1½" | 23.95 | |
| *One required per section | | |
| **140** HG-TOA Tilt-over 'gin-pole' ....T | 742.95 | 649.95 |

**Hy-Gain Crank-Up Towers are drop-shipped (shipped direct to you from the Hy-Gain factory). On these drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Lincoln, Nebraska via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient delivery time. Most truck lines will not unload the tower, so please be sure to have enough manpower and/or equipment on hand.**

### HY-GAIN ANTENNA ROTORS

| | | |
|---|---|---|
| **305** AR-40 Solid state light duty rotor | $262.95 | 239.95 |
| **302** CD-45-II Medium duty rotor | 369.95 | 339.95 |
| **302-2** CD-45-II 220v medium duty rotor | 369.95 | 339.95 |
| **304** HAM IV Heavy duty rotor | 529.95 | 449.95 |
| **307** HAM V Pathfinder Digital HD rotor | 899.95 | 769.95 |
| **303** T²X Tailtwister extra heavy duty rotor | 619.95 | 539.95 |
| **303-2** T²X 220v Tailtwister extra HD rotor | 619.95 | 539.95 |
| **303D** Pathfinder Tailtwister dig extra HD rotor | 970.95 | 839.95 |
| **300** HDR-300/A Deluxe digital hvy duty rotor | 1222.95 | 1049.95 |
| **306** Digital rotor control for HAM IV/T²X | 619.95 | 539.95 |

### OPTIONAL ACCESSORIES FOR ROTORS

| | | |
|---|---|---|
| **51467-10** MSHD Lwr mast support; HAM IV/T²X | $ 81.95 | |
| **51472-10** MSLD Lwr mast support; CD45II/AR40 | 28.95 | |
| **50559-10** TSP-1 Tower spacing kit ....Δmwfv | 23.95 | 9.95 |

**See BELDEN for rotor cable**

# ICOM (ICO)

| | | |
|---|---|---|
| **IC-781** Xcv/Rcv/ps/auto tune/scope spec ord | 8000.00 | 6599.95 |
| **FL-103** 2.8 KHz SSB filter | 123.00 | 109.95 |
| **UT-36** Voice synthesizer | 74.95 | |
| **IC-775DSP** Xcvr/ps/keyer/auto tuner/IF-DSP | 4760.00 | 3899.95 |
| **CR-282** High stability crystal unit | 168.00 | 149.95 |
| **FL-53A** 250 Hz CW filter (2nd IF) | 245.00 | 199.95 |
| **FL-101** 250 Hz CW filter (1st IF) | 133.00 | 119.95 |

## ICOM - continued

| | Reg | Sale |
|---|---|---|
| **FL-102** 6 KHz AM filter | 94.95 | |
| **FL-222** 1.9 KHz 455 KHz IF SSB filter | 249.00 | 199.95 |
| **FL-223** 1.9 KHz 9 MHz IF SSB filter | 105.00 | 99.95 |
| **FL-232** 350 Hz CW/RTTY filter | 113.00 | 104.95 |
| **HM-36** Scanning hand mic | 74.95 | |
| **MB-19** Rack mounting handles | 74.95 | |
| **SM-6** Desk microphone | 128.00 | 119.95 |
| **SM-8** 2-connector desk mic/up/down scan | 200.00 | 169.95 |
| **SP-20** Speaker w/audio filter | 310.00 | 249.95 |
| **SP-21** External speaker | 138.00 | 119.95 |
| **UT-66** Voice synthesizer | 83.95 | |
| **IC-756** Xcvr/Rcvr/6m/IF-DSP/tuner/keyer | 2445.00 | 1999.95 |
| **PS-85** Switching power supply | 406.00 | 299.95 |
| **AH-3** Automatic antenna tuner | 816.00 | 599.95 |
| **AH-2B** Bumper mt & whip | 379.00 | 299.95 |
| **CR-502** High stability oscillator crystal | 95.95 | |
| Suggest dealer installation of CR-502 | | |
| **FL-52A** 500 Hz CW filter (2nd IF) | 245.00 | 199.95 |
| **FL-53A** 250 Hz CW filter (2nd IF) | 245.00 | 199.95 |
| **FL-100** 500 Hz CW filter | 133.00 | 119.95 |
| **FL-101** 250 Hz CW filter | 133.00 | 119.95 |
| **FL-222** 1.9 KHz 455 KHz IF SSB filter | 249.00 | 199.95 |
| **FL-223** 1.9 KHz 9 MHz IF SSB filter | 105.00 | 99.95 |
| **FL-232** 350 Hz CW/RTTY filter | 113.00 | 104.95 |
| **SM-8** 2-connector desk mic/up/down scan | 200.00 | 169.95 |
| **SP-20** Speaker w/audio filter | 310.00 | 249.95 |
| **SP-21** External speaker | 138.00 | 119.95 |
| **UT-102** Voice synthesizer | 74.95 | |
| **MB-49** Mobile mounting bracket; IC-738 | 59.95 | |
| **IC-728** Xcvr/SW Rcvr w/mic ....Dmwfv | 1500.00 | 1099.95 |
| **PS-85** Switching power supply | 406.00 | 299.95 |
| **AH-3** Automatic antenna tuner | 816.00 | 599.95 |
| **AH-2B** Bumper mt & whip | 379.00 | 299.95 |
| **AT-160** Automatic antenna tuner ...Dmwfcv | 405.00 | 249.95 |
| **CR-64** High stability oscillator crystal | 156.00 | 139.95 |
| **FL-100** 500 Hz CW filter | 133.00 | 119.95 |
| **FL-101** 250 Hz CW filter | 133.00 | 119.95 |
| **MB-5** Mobile mount | 59.95 | |
| **SM-6** Desk microphone | 128.00 | 119.95 |
| **SP-3** External speaker | 140.00 | 124.95 |
| **SP-7** Small external speaker | 94.95 | |
| **SP-20** Speaker w/audio filter | 310.00 | 249.95 |
| **UI-7** AM/FM module for IC-728 | 119.00 | 109.95 |
| **UT-30** Tone encoder | 55.95 | |
| **IC-707** Xcvr/SW Rcvr w/mic ....† | 925.00 | 759.95 |
| **PS-85** Switching power supply | 406.00 | 299.95 |
| **AH-3** Automatic antenna tuner | 816.00 | 599.95 |
| **AH-2B** Bumper mt & whip | 379.00 | 299.95 |
| **CR-338** High stability crystal unit | 81.95 | |
| **FL-52A** 500 Hz CW filter (2nd IF) | 245.00 | 199.95 |
| **FL-53A** 250 Hz CW filter (2nd IF) | 245.00 | 199.95 |
| **MB-5** Mobile mount | 59.95 | |
| **SM-6** Desk microphone | 128.00 | 119.95 |
| **SP-3** External speaker | 140.00 | 124.95 |
| **SP-7** Small external speaker | 94.95 | |
| **SP-20** Speaker w/audio filter | 310.00 | 249.95 |
| **SP-21** External speaker | 138.00 | 119.95 |
| **UI-9** FM module | 113.00 | 104.95 |
| **UT-30** Tone encoder | 55.95 | |
| **IC-706** Mini Xcvr/SW Rcvr w/6 & 2m Dmwfcv | 1599.00 | 1199.95 |
| **$100 rebate from Icom - IC-706 thru 6/30/97** | | |
| **OPC-581 cable FREE with IC-706! Limited Time!** | | |
| **IC-706 Mk II** Mini Xcvr/SW Rcvr w/6 & 2m | 1599.00 | 1349.95 |
| **PS-85** Switching power supply | 406.00 | 299.95 |
| **AH-3** Automatic antenna tuner | 816.00 | 599.95 |
| **AH-2B** Bumper mt & whip | 379.00 | 299.95 |
| **AT-160** Automatic antenna tuner ...Dmwfcv | 405.00 | 249.95 |
| **OPC-599** 7+8-pin - 13-pin adapt; 706/AT160 | 60.95 | |
| **AT-180** Automatic antenna tuner; HF+6m | 749.00 | 549.95 |
| **OPC-598** 23' extension cable for AT-180 | 73.95 | |
| **FL-100** 500 Hz CW filter | 133.00 | 119.95 |
| **FL-101** 250 Hz CW filter | 133.00 | 119.95 |
| **FL-103** 2.8 KHz SSB filter | 123.00 | 109.95 |
| **FL-223** 1.9 KHz 9 MHz IF SSB filter | 105.00 | 99.95 |
| **FL-232** 350 Hz CW/RTTY filter | 113.00 | 104.95 |
| **CR-502** High stability oscillator crystal | 95.95 | |
| **HM-77A** TTP microphone | 151.00 | 139.95 |
| **MB-62** Mounting bracket for main unit | 25.95 | |

## ICOM - continued

| | Reg | Sale |
|---|---|---|
| **MB-63** Mounting bracket for control panel | 18.95 | |
| **MB-65** Mounting base platform | 35.95 | |
| **OPC-581** 11.5' separation cable | 60.95 | |
| **OPC-587** 16' separation cable | 79.95 | |
| **OPC-589** 8-pin to jack adapter | 35.95 | |
| **OPC-596** Accessory plug w/wires | 30.95 | |
| **OPC-599** 7+8-pin to 13-pin adapter | 60.95 | |
| **SM-8** 2-connector desk mic/up/down scan | 200.00 | 169.95 |
| **SP-7** Small external speaker | 94.95 | |
| **UT-102** Voice synthesizer | 74.95 | |
| **AH-2A** Antenna tuning system only .....Δmv | 950.00 | 499.95 |
| **AH-2B** Bumper mt & whip | 379.00 | 299.95 |
| **OPC-137** Adapt; AH-2/2A - 751A/745 | 25.95 | |
| **AT-150** 100w 9-band auto ant tuner ....Dmwv | 638.00 | 499.95 |
| **OPC-137** Adapt; AT-150 - 751A/745 | 25.95 | |
| **AT-500** 500w 9-band automatic ant tuner | 1369.00 | 999.95 |
| **OPC-118** Adapt; AT-500; 725/735/765/781 | 25.95 | |

### SHORTWAVE RECEIVERS

| | Reg | Sale |
|---|---|---|
| **R-1*** .1MHz-1.3GHz AM/FM handheld Rcvr Dm | $650.00 | 499.95 |
| **R-1-15** .1MHz-1.3GHz AM/FM hand/cell blkd Dmcv | 500.00 | 399.95 |
| **HP-4** Lightweight headphones | 29.95 | |
| Note: R-1/R-1-15 use 'W'-series HT accessories | | |
| **R-10-05** .5MHz-1.3G AM/FM hand/cell blkd .† | 610.00 | 499.95 |
| **R-10-15*** .5MHz-1.3GHz AM/FM/SSB HH Rcvr | 610.00 | 519.95 |
| **CP-12L** Right angle cig cable w/filter | 36.95 | |
| **CS-R10** DOS programming software; R-10 | 13.95 | |
| **OPC-474** Cloning cable (R-10 to R-10) | 18.95 | |
| **CSW-R10** Windows prog soft/cable; R-10 | 50.95 | |
| **CT-17** CI-V level converter | 169.00 | 149.95 |
| **HP-4** Lightweight headphones | 29.95 | |
| **LC-140** Carrying case for R-10 | 38.95 | |
| **OPC-254L** Right angle mini DC pwr cable | 14.95 | |
| **SP-13** Earphone | 4.95 | |
| **R-71A** Digital keyboard SW Receiver .....Dm | 1584.00 | 1199.95 |
| **CK-70**/EX-299 12v DC option; R71A Δmwfv | 41.95 | |
| **EX-257** FM unit; R-71A .....Δmwv | 109.00 | 99.95 |
| **FL-32A** 500 Hz CW filter; R-71A | 126.00 | 114.95 |
| **FL-44A** SSB filter; R-71A .....Δm | 284.00 | 179.95 |
| **FL-63A** 250 Hz CW filter; R-71A | 121.00 | 109.95 |
| **UI-8** FM unit; R-72A .....Δmwv | 119.00 | 69.95 |
| **UR-1** Receiver protector unit; R-72A .....Δm | 41.00 | 19.95 |
| **R-100*** .1MHz-1.856GHz AM/FM 12v Rcvr | 960.00 | 799.95 |
| **R-100-11** .1MHz-1.856GHz am/fm 12v Rcv/cell blkd | 960.00 | 799.95 |
| **AH-7000** 25-1000 MHz discone ant w/coax | 206.00 | 179.95 |
| **CP-11** Cig cord w/noise filter | 40.95 | |
| **HP-4** Lightweight headphones | 29.95 | |
| **R-7000*** 25 MHz-2 GHz scanning receiver Dm | 1667.00 | 1299.95 |
| **AH-7000** 25-1000 MHz discone ant w/coax | 206.00 | 179.95 |
| **CK-70** (EX-299) 12v DC option | 41.95 | |
| **MB-12** Mobile mount | 59.95 | |
| **RC-12** Infrared wireless remote control | 138.00 | 124.95 |
| **SP-3** External speaker | 140.00 | 124.95 |
| **TV-R7000** ATV unit for R-7000 | 371.00 | 329.95 |
| **R-8500** .1MHz - 2GHz receiver/cell blocked .† | 2465.00 | 1899.95 |
| **R-8500-03*** .1MHz - 2GHz receiver | 2465.00 | 2049.95 |
| **AH-7000** 25-1000 MHz discone ant w/coax | 206.00 | 179.95 |
| **CR-293** High stability xtal unit | 380.00 | 329.95 |
| **FL-52A** 500 Hz CW filter | 245.00 | 199.95 |
| **MB-12** Mobile mount | 59.95 | |
| **SP-7** Small external speaker | 94.95 | |
| **SP-21** External speaker | 138.00 | 119.95 |
| **TV-R7100** TV/FM adapter; R-8500/R-7100 | 426.00 | 369.95 |
| **UT-102** Voice synthesizer | 74.95 | |
| **R-9000*** .1-1999.8MHz Rcvr/spectrum scope | 7600.00 | 6389.95 |

*United States & state government agencies or a political subdivision thereof and communications utility companies and their legal agents **ONLY** may purchase unblocked models of R-1/R-10/R-100/R-7000/R-8500 and/or R-9000 for official government or communications utility company use only. Mail or FAX purchase order to AES.

| | Reg | Sale |
|---|---|---|
| **SP-20** Speaker w/audio filter | 310.00 | 249.95 |
| **UT-36** Voice synthesizer | 74.95 | |

### 2m TRANSCEIVERS

| | Reg | Sale |
|---|---|---|
| **IC-2000H** 50w 2m FM Xcvr w/TTP mic .....† | $334.00 | 269.95 |
| **OPC-347** 23' DC power cable | 46.95 | |
| **OPC-589** 8-pin to jack adapter | 35.95 | |
| **UT-85** Tone squelch unit | 76.95 | |

## ICOM - continued

| | Reg | Sale |
|---|---|---|
| **UT-101** DTMF unit | 28.95 | |
| **IC-281H** 50w 2m FM Xcvr/TTP/9600 ...Dmwfv | 513.00 | 379.95 |
| **MB-17A** Quick release bracket | 49.95 | |
| **OPC-347** 23' DC power cable | 46.95 | |
| **OPC-440** Mic extension cable | 85.95 | |
| **OPC-589** 8-pin to jack adapter | 35.95 | |
| **UT-66** Voice synthesizer | 83.95 | |
| **UT-85** Tone squelch unit | 76.95 | |
| **FL-83** CW filter; IC-275H .....Δmv | 150.00 | 99.95 |
| **UT-55** DTMF tone enc/dec; 2330A/2340 .Δmf | 69.95 | |
| **UT-67** Tone squelch unit; IC-2330A ....Δmwfv | 124.00 | 79.95 |
| **IC-207H** 45w 2m/35w 440 FM Xcvr/TTP mic | 488.00 | 409.95 |
| **BC-96** Microphone holder | 43.95 | |
| **CP-13L** Cig cable w/filter for BC-96 | 40.95 | |
| **OPC-288L** DC power cable for BC-96 | 19.95 | |
| **EX-1759** Infrared receiver | 110.95 | 99.95 |
| **HM-90A** Wireless microphone | 209.00 | 169.95 |
| **HS-62** Flexible mobile mic | 70.95 | |
| **MB-58** Remote controller bracket | 39.95 | |
| **OPC-347** 23' DC power cable | 46.95 | |
| **OPC-440** Mic extension cable | 85.95 | |
| **OPC-441** Speaker extension cable | 33.95 | |
| **OPC-589** 8-pin to jack adapter | 35.95 | |
| **OPC-600** 11.5' separation kit | 45.95 | |
| **OPC-601** 23' separation kit | 60.95 | |
| **OPC-647** 8.2' mic extension cable | 54.95 | |
| **IC-2350H** 50w 2m/35w 440 FM/TTP Dmwfcv | 599.00 | 399.95 |
| **MB-17A** Quick release bracket | 49.95 | |
| **OPC-347** 23' DC power cable | 46.95 | |
| **OPC-440** Mic extension cable | 85.95 | |
| **OPC-589** 8-pin to jack adapter | 35.95 | |
| **UT-101** Pager/code squelch | 28.95 | |
| **UT-89** Tone scan/decode unit | 110.00 | 99.95 |
| **IC-2700H LTD** 50w 2m/35w 440FM/HM90A mic | 860.00 | 639.95 |
| **HM-90A wireless mic w/IC-2700H LTD! Limited Time!** | | |
| **IC-2700H** 50w 2m/35w 440/reg TTP .Dmwfcv | 755.00 | 449.95 |
| **BC-96** Microphone holder | 43.95 | |
| **EX-1513** Infrared sub receiver | 28.95 | |
| **HM-90A** Wireless microphone | 209.00 | 169.95 |
| **MB-17A** Quick release bracket | 49.95 | |
| **MB-58** Remote controller bracket | 39.95 | |
| **OPC-347** 23' DC power cable | 46.95 | |
| **OPC-438** 11.5' separation kit | 41.95 | |
| **OPC-439** 23' separation kit | 60.95 | |
| **OPC-440** Mic extension cable | 85.95 | |
| **OPC-441** Speaker extension cable | 33.95 | |
| **OPC-589** 8-pin to jack adapter | 35.95 | |
| **UT-66** Voice synthesizer | 83.95 | |
| **UT-84** Tone squelch unit | 110.00 | 99.95 |
| **IC-2710H** 50w 2m/35w 440 FM Xcvr/TTP mic | 673.00 | 569.95 |
| **BC-96** Microphone holder | 43.95 | |
| **CP-13** Cig cable w/filter for BC-96 | 40.95 | |
| **OPC-288** DC power cable for BC-96 | 19.95 | |
| **CS-2710** DOS prog software; IC-2710H | 13.95 | |
| **OPC-646** Cloning cable | 89.95 | |
| **CSW-2710** Win prog soft/cable; IC-2710H | 50.95 | |
| **EX-1513** Infrared sub receiver | 28.95 | |
| **EX-1759** Infrared receiver | 110.00 | 99.95 |
| **HM-90A** Wireless microphone | 209.00 | 169.95 |
| **HS-62** Flexible mobile mic | 70.95 | |
| **MB-58** Remote controller bracket | 39.95 | |
| **MB-65** Mounting base platform | 35.95 | |
| **OPC-347** 23' DC power cable | 46.95 | |
| **OPC-440** Mic extension cable | 85.95 | |
| **OPC-441** Speaker extension cable | 33.95 | |
| **OPC-589** 8-pin to jack adapter | 35.95 | |
| **OPC-600** 11.5' separation kit | 45.95 | |
| **OPC-601** 23' separation kit | 60.95 | |
| **OPC-647** 8.2' mic extension cable | 54.95 | |
| **UT-49** DTMF decoder unit | 74.95 | |
| **UT-104** Tone squelch unit | 80.95 | |
| **IC-820H** 2m/430 SB/FM sat Xcv/9600 Dmwfcv | 1675.00 | 1099.95 |
| **IC-821H** 2m/430 SSB/FM sat Xcvr/9600/mic ..† | 2095.00 | 1699.95 |
| **PS-85** Switching power supply | 406.00 | 299.95 |
| **AG-25** 2m mast mounted GaSFET preamp | 220.00 | 189.95 |
| **AG-35** 430 MHz mast mounted preamp | 228.00 | 199.95 |
| **CR-293** High stability xtal unit | 380.00 | 299.95 |
| **FL-132** 500 Hz CW filter | 133.00 | 119.95 |

## ICOM - continued

| | Reg | Sale |
|---|---|---|
| **HM-12** Scan hand microphone | 74.95 | |
| **MB-5** Mobile mount | 59.95 | |
| **SM-6** Desk microphone | 128.00 | 119.95 |
| **SP-3** External speaker | 140.00 | 124.95 |
| **SP-7** Small external speaker | 94.95 | |
| **SP-20** Speaker w/audio filter | 310.00 | 249.95 |
| **SP-21** External speaker | 138.00 | 119.95 |
| **UT-36** Voice synthesizer; 820H | 74.95 | |
| **UT-50** Tone decoder | 74.95 | |
| **UT-84** Tone squelch unit; 821H | 110.00 | 99.95 |
| **UT-102** Voice synthesizer; 821H | 74.95 | |
| **IC-Delta-100H** 2m/440/1.2 GHz FM Xcvr/TTP | 1500.00 | 1259.95 |
| **MB-50** Remote controller bracket | 29.95 | |
| **OPC-332** 11.5' separation kit | 30.95 | |
| **OPC-333** 23' separation kit | 38.95 | |
| **OPC-335** 16.4' speaker cable | 40.95 | |
| **OPC-347** 23' DC power cable | 46.95 | |
| **UT-66** Voice synthesizer | 83.95 | |
| **UT-75** DTMF decoder unit | 69.95 | |
| **UT-76** Tone squelch unit | 165.00 | 139.95 |
| **AH-32** 2m/440 dual band mob ant .....Δmfc | 83.00 | 49.95 |
| **AHB-32** Tnk lip mt, coax; AH-32 .....Δwf | 76.00 | 19.95 |

### Accessories for IC-2AT

| | Reg | Sale |
|---|---|---|
| **AD-12** External pwr adapter; 2/4GAT/32AT | $43.95 | |
| **BA-10** Bottom slide cap | 14.95 | |
| **BC-16U**/BM-112U Wall cgr; BP-5A/7/8 only | 32.95 | |
| **BC-25U** Extra wall charger; BP-3 only | 35.95 | |
| **BC-35** Drop-in rapid charger | 150.00 | 129.95 |
| **BP-2** 425ma 7.2v long life battery | 85.95 | |
| **BP-3** 250ma 8.4v battery | 65.95 | |
| **BP-4** Alkaline battery cases | 35.95 | |
| **BP-5** 425ma 10.8v high power battery | 109.00 | 99.95 |
| **BP-5A** 425 ma 10.8v direct charge batt | 109.00 | 99.95 |
| **BP-7** 425ma 13.5v 5w battery | 121.00 | 109.95 |
| **BP-8** 800ma 8.4v long life battery | 120.00 | 109.95 |
| **BP-70** Extra 270ma 13.2v batt; 2GAT/32AT | 113.00 | 104.95 |
| **CP-1** Cig cgr; BP-3/7/8//DC cord | 26.95 | |
| **CP-10** Battery separation cable/clip ..Δmwfv | 51.00 | 29.95 |
| **CP-11** Cig cord w/noise filter | 40.95 | |
| **DC-1** DC operation module | 40.95 | |
| **FA-2** Extra 2m flexible antenna | 29.95 | |
| **FA-140B** Extra 2m flex ant for IC-2GAT | 29.95 | |
| **FA-1443B** Extra 2m/440 dual band flex ant | 29.95 | |
| **HH-SS** Handheld shoulder strap .....Δmwfv | 29.00 | 19.95 |
| **HM-9** Speaker/mic | 59.95 | |
| **HM-46** Slim-line speaker/mic | 59.95 | |
| **HS-10** Boom mic/headset | 69.95 | |
| **HS-10SA** VOX unit | 69.95 | |
| **HS-10SB** PTT switchbox | 69.95 | |
| **HS-51** Headset w/VOX | 96.95 | |
| **MB-16** Window/car door mount .....Δmwfv | 40.00 | 24.95 |
| **MB-16D** Mobile mtg bkt fol HT .....Δmwfc | 40.00 | 24.95 |
| **MB-24** Window/car door mt; 2GAT .....Δf | 41.00 | 14.95 |
| **UT-40** Tone squelch decoder; 2GAT/32AT | 83.95 | |

### Accessories for P-series hand-helds

| | Reg | Sale |
|---|---|---|
| **BC-74**/BC-110A Extra wall cgr; BP-111-114 | $40.95 | |
| **BP-111** Extra 7.2v 400ma 1.5w battery .....Dc | 68.95 | |
| **BP-113** 7.2v 1200ma 1.5w battery .....Dmwv | 101.00 | 89.95 |

### Accessories for IC-2iA

| | Reg | Sale |
|---|---|---|
| **AD-26** Batt pack adapt; rapid cgr .....Δmwfv | $18.00 | 10.95 |
| **BP-120** AA alkaline battery case | 35.95 | |
| **HM-9L** Speaker/mic .....Δmwfv | 59.00 | 36.95 |
| **LC-83** Vinyl case for BP-121 .....Δf | 35.00 | 12.95 |
| **LC-85** Vinyl case for BP-123/124 .....Δf | 35.00 | 12.95 |
| **IC-T2A** 2m FM HT/8 AA nicads/cgr | 227.00 | 189.95 |
| **AD-81** Adapter for BC-119-11 | 17.95 | |
| **BC-119-11** Desk charger (adapter required) | 103.00 | 94.95 |
| **BP-194** AA alkaline battery case | 18.95 | |
| **BP-195** 9.6v 700ma nicad battery | 42.95 | |
| **BP-196** 9.6v 1050ma nicad battery | 53.95 | |
| **CP-12L** Right angle cig cable w/filter | 36.95 | |


**AES® Gift Certificates**

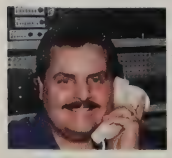
**Information next to Order Blank**

## ICOM - continued

| | Reg | Sale |
|---|---|---|
| CS-T2 DOS prog software for IC-T2A | 13.95 | |
| OPC-474 Cloning cable (T2A to T2A) | 18.95 | |
| OPC-478 PC to radio cloning cbl; T2A | 45.95 | |
| CSW-T2 Windows prog software/cable; T2A | 50.95 | |
| HM-46 Slim-line speaker/mic | 59.95 | |
| HM-54 Hvy duty spkr/mic | 83.95 | |
| HM-75A Remote control microphone | 96.95 | |
| HS-51 Headset w/VOX | 96.95 | |
| LC-145 Carrying case for IC-T2A | 38.95 | |
| OPC-254L Right angle mini DC pwr cable | 14.95 | |
| SP-13 Earphone | 4.95 | |
| AD-51 Batt pack adapt; rapid cgr; W31A/Z1A | 14.95 | |
| LC-123 Vinyl case; Z1A; BP170/71/72 Δmwfc | 38.95 | |
| LC-124 Vinyl case; IC-Z1A w/BP-173 ....Δwfv | 38.95 | |
| UT-93 Tone squelch; early IC-Z1A .....Δmwfcv | 83.00 | 39.95 |
| IC-T22A 2m FM HT/batt/cgr/TTP | 283.00 | 239.95 |
| IC-T7A 2m/440 FM HT/batt/cgr/TTP | 330.00 | 279.95 |
| IC-W32A 5w 2m/440 FM HT/batt/cgr/TTP/tone | 424.00 | 359.95 |
| AD-56 Batt pack adapter for rapid charger | 18.95 | |
| BC-119-11 Desk charger (adapter required) | 103.00 | 94.95 |
| BC-74/BC-110A Extra wall cgr; BP-111-114 | 40.95 | |
| BP-170 Battery case | 35.95 | |
| BP-171 4.8v 700ma battery .....Δmwfcv | 83.00 | 49.95 |
| BP-172 4.8v 950ma battery | 91.95 | |
| BP-173 9.6v 600ma battery | 150.00 | 139.95 |
| BP-180 7.2v 600ma battery | 83.95 | |
| CP-12 Cig lighter cable w/filter | 36.95 | |
| CP-12L Right angle cig cable w/filter | 36.95 | |
| CS-T7 DOS prog software for IC-T7A | 13.95 | |
| CSW-32 DOS prog software for IC-W32A | 13.95 | |
| OPC-474 Cloning cbl (T7/32A to T7/32A) | 18.95 | |
| OPC-478 PC to radio cloning cbl;T7A/W32A | 45.95 | |
| CSW-T7 Windows prog software/cable; T7A | 50.95 | |
| CSW-W32 Windows prog soft/cable; W32A | 50.95 | |
| HM-46 Slim-line speaker/mic | 59.95 | |
| HM-46L Slim-line spkr/mic, rt angle plug | 59.95 | |
| HM-54 Hvy duty spkr/mic | 83.95 | |
| HM-75A Remote control microphone | 96.95 | |
| HS-85 Headset | 105.00 | 94.95 |
| LC-125 Vinyl case; T22A w/BP170/171/172 | 38.95 | |
| LC-126 Vinyl case; T22A w/BP173 | 38.95 | |
| LC-128 Vinyl case; IC-W32A | 38.95 | |
| LC-136 Vinyl case; T7A w/BP170/171/172 | 38.95 | |
| LC-137 Vinyl case; T7A w/BP173/180 | 38.95 | |
| MB-30 Mobile/wall bracket | 41.95 | |
| NCP-1 Nylon chest pack | 44.95 | 39.95 |
| OPC-254 Mini DC power cable | 14.95 | |
| OPC-254L Right angle mini DC pwr cable | 14.95 | |
| SP-13 Earphone | 4.95 | |
| UT-94 Tone squelch unit; T22A | 55.95 | |
| BP-130 Battery case; V21AT .....Dmwfv | 35.95 | |
| BP-131 900ma 7.2v batt/mic; V21AT Δmwcv | 133.00 | 89.95 |
| BP-132 600ma 12v batt/mic; V21AT Δmwfcv | 150.00 | 99.95 |
| BP-157 900ma 7.2v battery; V21AT .....Dwfcv | 68.95 | |
| HM-75 Spkr/mic w/rem control;V21AT Δmwfv | 96.95 | 89.95 |
| LC-104 Vinyl case; V21A w/BP-132 .....Dmwc | 30.00 | 19.95 |
| LC-105 Case; W21AT w/BP-130/131 .....Dw | 30.95 | |
| LC-106 Vinyl case; W21AT w/BP-132 .....Dw | 30.00 | 26.95 |

### Accessories for IC-2SAT/2SRA/24AT/W2A

| | | |
|---|---|---|
| AD-14 BC-74 charge adapter | $ 43.95 | |
| AH-20 Replacement rcv ant for IC-2SRA | 28.95 | |
| BA-11 Bottom cap | 11.95 | |
| BA-12 Drop-in charger adapter | 29.95 | |
| BC-72 Rapid desk charger | 186.00 | 149.95 |
| BC-74/BC-110A Extra wall cgr; 24AT/S-series | 40.95 | |
| BC-77/BC-105A Extra wall cgr; W2A/2SRA | 40.95 | |
| BP-81 7.2v 110ma battery .....Δv | 76.00 | 59.95 |
| BP-82 7.2v 300ma battery .....Δmwfcv | 83.00 | 49.95 |
| BP-83 7.2v 600ma battery | 90.95 | |
| BP-84 7.2v 1000ma battery | 120.00 | 109.95 |



**EDDIE, KD4RAZ**
Sales – Orlando Store

**Se habla español**
**AES® ORLANDO**
**1-407-898-1166**
**1-800-327-1917**

## ICOM - continued

| | Reg | Sale |
|---|---|---|
| BP-85 12v 340ma 5w battery | 155.00 | 129.95 |
| BP-90 AA alkaline battery case | 35.95 | |
| CP-12 Cig lighter cable w/filter | 36.95 | |
| CP-13 Cig cable w/filter; W2A/2SRA | 40.95 | |
| HM-9 Speaker/microphone | 59.95 | |
| HM-46 Slim-line speaker/mic | 59.95 | |
| HM-54 Hvy duty spkr/mic; not for 2G/W2A | 83.95 | |
| HM-65 Slim-line spkr/mic; W2A/2SRA | 76.95 | |
| HS-51 Headset w/VOX | 96.95 | |
| HS-60 VOX headset; W2A/2SRA .....Dmfc | 121.00 | 49.95 |
| LC-71 Case; W2A/2SRA w/BP81/BA11 ....Δwv | 35.00 | 9.95 |
| MB-22 Alligator belt/pocket clip | 15.95 | |
| MB-25 Stainless wall storage unit .....Δmwfc | 41.00 | 24.95 |
| MB-30 Mobile/wall bracket | 41.95 | |
| OPC-254 Mini DC power cable | 14.95 | |
| OPC-288 Mini DC pwr cord; W2A/2SRA | 19.95 | |
| UT-49 DTMF decoder unit for S-series | 74.95 | |
| UT-50 Tone decoder | 74.95 | |
| UT-51 Programmable tone encoder unit | 83.95 | |
| IC-2GXAT/HP 7w 2m FM HT/batt/cgr/TTP ....† | 377.00 | 289.95 |
| AD-25 Battery charger adapter | 63.95 | |
| AD-28 Batt pack adapter for rapid charger | 18.95 | |
| BC-119-11 Desk charger (adapter required) | 103.00 | 94.95 |
| BC-77/BC-105A Extra wall charger | 40.95 | |
| BP-130A Battery case .....† | 35.00 | 24.95 |
| BP-132A 600ma 12v battery/mic | 150.00 | 129.95 |
| BP-157A 900ma 7.2v battery | 85.95 | |
| BP-160 700ma 7.2v battery .....Δmwfcv | 66.00 | 39.95 |
| BP-174 600ma 12v battery | 98.95 | |
| CP-13 Cig cable w/filter | 40.95 | |
| CP-13L Right angle cig cable w/filter | 40.95 | |
| HM-46 Slim-line speaker/mic | 59.95 | |
| HM-46L Slim-line spkr/mic, rt angle plug | 59.95 | |
| HM-54 Heavy duty spkr/mic | 83.95 | |
| HM-55A Speaker/mic w/TTP .....Δmfcv | 159.00 | 99.95 |
| HS-51 Headset w/VOX | 96.95 | |
| LC-116 Carrying case; BP-130A/157A/160 | 38.95 | |
| LC-117 Carrying case for BP-132A | 38.95 | |
| MB-30 Mobile/wall bracket | 41.95 | |
| OPC-288 Mini DC power cable | 19.95 | |
| OPC-288L Right angle mini DC pwr cable | 19.95 | |
| SP-13 Earphone | 4.95 | |
| UT-49 DTMF decoder unit | 74.95 | |
| AD-22 External batt chg adapt; D1A ...Dmwfv | 50.95 | 39.95 |
| AD-27 Batt pack adapt; rapid cgr; D1A ...Dmf | 14.95 | |
| BP-101 700ma 7.2v battery; Delta-1A Δmwfv | 94.00 | 59.95 |
| BP-102 1200ma 7.2v batt; Delta-1A ..Δmwfv | 129.00 | 89.95 |
| BP-103 600ma 12v battery; Delta-1A ..Δmwf | 151.00 | 109.95 |
| HM-65 Slim-line spkr/mic; Delta-1A | 76.95 | |
| LC-81 Vinyl case; BP100/101/102; D1A ..Δmf | 35.95 | |
| LC-82 Vinyl case for BP-103; Delta-1A Δmwv | 35.95 | |
| UT-70 Tone encoder/decoder; D1A .....Δmwfv | 200.00 | 129.95 |
| AD-44 Batt pack adapter for rapid cgr; T21A | 18.95 | |
| BP-151 800ma 6v battery; IC-T21A | 58.95 | |
| BP-152 1100ma 6v battery; T21A .....Δwfcv | 66.00 | 49.95 |
| BP-153 600ma 12v battery; IC-T21A | 150.00 | 119.95 |
| BP-159 Battery case; IC-T21A | 35.95 | |
| LC-109 Vinyl case for BP-151/159; IC-T21A | 38.95 | |
| LC-110 Vinyl case for BP-153; ICT21A Δmwfv | 38.00 | 22.95 |
| LC-111 Vinyl case for BP-152; IC-T21A | 38.95 | |
| RP-1520 25w 2m FM repeater | 3025.00 | 2499.95 |
| Repeaters require service dept. set-up; $72 minimum | | |

### 220 MHz TRANSCEIVERS

| | | |
|---|---|---|
| RP-2210 25w 220 MHz FM repeater .....Δv | 2700.00 | 2099.95 |
| Repeaters require service dept. set-up; $72 minimum | | |

### 430/440 MHz TRANSCEIVERS

| | | |
|---|---|---|
| IC-481H 35w 440 FM Xcvr/TTP/9600 baud | $579.00 | 479.95 |
| IC-4GXAT 440 FM HT/batt/cgr/TTP | 355.00 | 299.95 |
| IC-T41A 440 FM HT/batt/cgr/TTP .....Dmwv | 360.00 | 249.95 |
| IC-T42A 440 FM HT/batt/cgr/TTP .....Dmwv | 306.00 | 259.95 |

IC-4GXAT uses same accessories as IC-2GXAT
IC-T41A uses same accessories as IC-T21A
IC-T42A uses same accessories as IC-T22A

| | | |
|---|---|---|
| RP-4020/50w 50w 440MHz FM repeater ..Δw | 3200.00 | 2399.95 |
| Repeaters require service dept. set-up; $72 minimum | | |

### ACCESSORIES FOR IC-901

| | | |
|---|---|---|
| MB-21 Bracket for controller unit .....Δm | $ 26.00 | 14.95 |

## ICOM - continued

| | Reg | Sale |
|---|---|---|
| OPC-189 Fiber optic cable 65' extension Dmw | 104.00 | 59.95 |
| AG-1200 1.2 GHz mast mounted preamp | 189.00 | 169.95 |

### ACCESSORIES

| | | |
|---|---|---|
| CT-16 Satellite interface unit | $160.00 | 144.95 |
| CT-17 CI-V level converter | 169.00 | 149.95 |
| UX-14 CI-IV/CI-V converter for CT-17 | 124.00 | 109.95 |
| EX-243 Keyer unit; earlier Xcvrs .....Dmwfv | 110.00 | 99.95 |
| HM-7 Amplified mobile mic, 8-pin | 74.95 | |
| HM-12 Scan hand microphone | 74.95 | |
| HM-14 Scan/TTP microphone | 113.00 | 99.95 |
| HM-56A Autodial TTP mic | 173.00 | 149.95 |
| MB-23 Side mount carrying handle | 15.95 | |
| OPC-052 2-pin cord for PS-30 .....Δv | 12.00 | 4.95 |
| OPC-137 24-pin adaptr cbl; all base | 25.95 | |
| PS-85 Power supply | 406.00 | 299.95 |
| SM-6 Electret desk microphone | 128.00 | 119.95 |
| SM-8 2-connector desk mic w/up/down scan | 200.00 | 169.95 |
| SM-20 Stand mic for base stations | 259.00 | 219.95 |
| SP-3 External speaker | 140.00 | 124.95 |
| SP-5 Mobile speaker | 54.95 | |
| SP-7 Small external speaker | 94.95 | |
| SP-10 Slim-line external speaker | 69.95 | |
| SP-12 Slim-line speaker w/visor clip | 44.95 | |
| SP-20 Speaker w/audio filter | 310.00 | 249.95 |
| UT-34 Tone squelch unit | 94.95 | |

## INTERFLEX (INT)

| | |
|---|---|
| dspGOLD Software for AEA DSP-2232 .....f | $129.95 |
| KaGOLD DualPort Software for KPC/KAM ....f | 79.95 |
| KaGOLD DualPort w/Pactor Soft; KPC/KAM .....f | 99.95 |
| PkGOLD w/Pactor Software for PK-232MBX .f | 99.95 |
| PkGOLD/900 Software for PK-900 .....f | 129.95 |

## International Ant (IAC)

| | | |
|---|---|---|
| 80m double Bazooka 121' antenna | $135.95 | |
| 40m double Bazooka 64' antenna | 115.95 | |

## JPS (JPS)

| | | |
|---|---|---|
| ANC-4 Antenna noise canceller | $195.00 | 189.95 |
| NF-60 Auto DSP audio spectral notch filt Δmwc | 160.00 | 129.95 |
| NIR-10 Dlx noise/notch DSP bandpass filt Dmwfv | 299.95 | 229.95 |
| NIR-12* Dual DSP noise reduction/filter unit | 375.00 | 349.95 |
| Power Pack 115vac/12vdc adapter | 16.95 | |
| SDK-12 Software development kit; NIR-12 | 35.95 | |
| NRF-7 Noise reducer and filter unit ....Δmwfv | 219.95 | 169.95 |
| Power Pack 115vac/12vdc adapter | 16.95 | |

## JSC (JSC)

### ROTOR CABLE

| | |
|---|---|
| JRR-520 5-wire; AR-40 .....Δmw, per ft. | 14¢ |
| JRR-520 .....Δmw, 100 ft. Roll | 12.95 |
| JRR-520 .....Δmw, 500 ft. Roll | 44.95 |
| JRR-520 .....Δmw, 1000 ft. Roll | 79.95 |

## K-COM (KCO)

| | |
|---|---|
| RF-1 Modular telephone 3-30 MHz RFI filter | $ 16.95 |
| RF-1/Low Modular phone .5-3 MHz RFI filter | 16.95 |
| RF-1/2-line 2-line modular 3-30 MHz RFI filt | 22.95 |
| RF-1/coiled Coiled cord modular 3-30MHz filt | 22.95 |
| RF-2 Hard-wired telephone 3-30 MHz RFI filt | 10.95 |

## KLM (KLM)

### ANTENNAS

| | | |
|---|---|---|
| 160V 160, 80 or 40m vertical, 24' high .....* | $300.00 | 259.95 |
| 80M-1 80m rotatable dipole, 90' long .....*T | 980.00 | 849.95 |
| 80M-1R 80m rotatable dipole w/relays .....*T | 1387.00 | 1199.95 |
| 80M-2 80m 2 el beam, 36' boom, 4 db .....*T | 3251.00 | 2799.95 |
| 80M-2R 80m 2 el beam w/relays .....*T | 4154.00 | 3579.95 |
| 80M-3 80m 3 el beam, 60' boom, 7 db .....*T | 5416.00 | 4669.95 |
| 80M-3R 80m 3 el beam w/relays .....*T | 7043.00 | 6069.95 |
| SSV-80-40-15 80/40/15m vert, 65' high ...*T | 966.00 | 839.95 |
| 6-12-8LPA 6-12 MHz 8el LP, 36' boom .....*T | 2465.00 | 2129.95 |
| Heavy duty boom only for 6-12-8LPA .....*T | 540.00 | 469.95 |
| 6-12-8LPA w/Heavy duty boom .....*T | 2865.00 | 2469.95 |
| 6-30-15LPA 6-30 MHz 15el LP, 46' boom ...*T | 4078.00 | 3519.95 |
| 7.2/10-30-LPA 7,10-30MHz 8 el, 42' bm ...*T | 1459.00 | 1259.95 |
| Heavy duty boom only for 7.2/10-30-LPA .*T | 499.00 | 429.95 |
| 7.2/10-30-LPA w/heavy duty boom .....*T | 1921.00 | 1659.95 |
| 40M-1B 40m rotatable dipole, 46.5' bm .....* | 261.00 | 229.95 |
| 40M-2B 40m 2 el beam, 16' boom, 4.9 db ..* | 638.00 | 549.95 |

## KLM - continued

| | Reg | Sale |
|---|---|---|
| **40M-3B** 40m 3 el beam, 32' boom, 6.5 db ..* | 911.00 | 789.95 |
| Heavy duty boom only for **40M-3B** .....*T | 367.00 | 319.95 |
| **40M-3B w/heavy duty boom** .....*T | 1214.00 | 1049.95 |
| **40M-4B** 40m 4 el beam, 42' boom, 7.2 db ..* | 1213.00 | 1049.95 |
| Heavy duty boom only for **40M-4B** .....*T | 499.00 | 429.95 |
| **40M-4B w/heavy duty boom** .....*T | 1716.00 | 1479.95 |
| **40-10V** 40/20/15/10m 26.5' vertical .....m* | 373.00 | 299.95 |
| **10-30-7LPA** 10-30MHz 7el LP, 30' bm, 7db *T | 1043.00 | 899.95 |
| Heavy duty boom only for **10-30-7LPA** .....*T | 473.00 | 409.95 |
| **10-30-7LPA w/heavy duty boom** .....*T | 1577.00 | 1359.95 |
| **SK-8** Conv kit for 10-30 log w/o 40m dipole ..* | 333.00 | 289.95 |
| **SK-8/40M** Conv kit for 10-30 log w/40m dipole ..* | 502.00 | 439.95 |
| **KT-31** 20-15-10m 24.5' rotatable dipole .....* | 317.00 | 269.95 |
| **KT-34A** 20-15-10m, 4 el, 16' boom, 7 db ..... | 624.00 | 539.95 |
| **KT-34 Upgrade** kit - KT-34A to XA .....* | 334.00 | 289.95 |
| **KT-34XA** 20-15-10m, 6 el, 32' boom, 9 db ..... | 858.00 | 739.95 |
| Heavy duty boom only for **KT-34XA** .....*T | 376.00 | 329.95 |
| **KT-34XA w/heavy duty boom** .....*T | 1206.00 | 1039.95 |
| **30M-2** 30m 2 el beam .....* | 520.00 | 449.95 |
| **30M-3** 30m 3 el beam .....* | 754.00 | 649.95 |
| **20M-4** 20m 4 el beam, 21' boom, 7.7 db .....* | 541.00 | 469.95 |
| **20M-5** 20m 5 el beam, 42' boom, 9.7 db ...*T | 837.00 | 729.95 |
| Heavy duty boom only for **20M-5** .....*T | 499.00 | 429.95 |
| **20M-5 w/heavy duty boom** .....*T | 1248.00 | 1079.95 |
| **20M-6** 20m 6 el beam, 57' boom, 11 db ....*T | 1206.00 | 1039.95 |
| Heavy duty boom only for **20M-6** .....*T | 659.00 | 569.95 |
| **20M-6 w/heavy duty boom** .....*T | 1750.00 | 1499.95 |
| **20-30-6LPA** 20-30MHz, 6el LP, 19'bm, 7db ..* | 391.00 | 339.95 |
| **17M-3** 17m 3el beam, 16.75' bm, 6.5db ...*T | 443.00 | 389.95 |
| **15M-4** 15m 4 el beam, 14' boom, 7.7db .....* | 287.00 | 249.95 |
| **15M-6** 15m 6 el beam, 36' boom, 10.5db ..*T | 679.00 | 589.95 |
| Heavy duty boom only for **15M-6** .....*T | 406.00 | 349.95 |
| **15M-6 w/heavy duty boom** .....*T | 989.00 | 859.95 |
| **15M-6LD** As 15M-6, but light duty .....* | 527.00 | 459.95 |
| **12-17-30D** WARC tri-band dipole .....* | 317.00 | 279.95 |
| **12-17-30V** WARC tri-band vertical .....* | 166.00 | 149.95 |
| **10M-4** 10m 4 el beam, 10' bm, 7.7 db .....* | 263.00 | 229.95 |
| **10M-6** 10m 6 el beam, 27.5' boom, 11 db ...* | 415.00 | 369.95 |
| **JV-10** 10m 26' vertical antenna .....* | 122.00 | 109.95 |

**Note: All KLM antennas supplied with a KLM balun/matching system, which is included in the price.**

| | | |
|---|---|---|
| **6M-5** 6m 5 el beam, 11.75' boom, 9.7 db ..... | 261.00 | 229.95 |
| **6M-7LB** 6m 7el, 25.75' bm, 11.5db .....* | 381.00 | 339.95 |
| **6M-7LD** 6m 7 el beam, 20' bm, 10.5 db ....v* | 298.00 | 259.95 |
| **6M-10** 6m 10 el beam, 34' boom, 11.7 db .*T | 542.00 | 469.95 |
| **6M-14** 6m 14 el beam, 61' boom, 14 db ....*T | 754.00 | 649.95 |
| **JV-6** 6m 15' vertical antenna, 3 db ....Δmwfv | 129.00 | 99.95 |
| **2M-4X** 2m 4 el rear mt beam, 4.2' bm, 8.5db | 81.00 | 74.95 |
| **2M-7X** 2m 7 el beam, 8.75' boom, 10.3 db .... | 91.00 | 84.95 |
| **2M-8** 2m 8 el beam, 7.25' bm, 10.3db .Dmwf | 124.30 | 79.95 |
| **2M-10X** 2m 10 el beam, 15' boom, 12.5 db ... | 104.00 | 94.95 |
| **2M-11X** 2m 11 el beam, 15.33' bm, 12.5 db . | 108.00 | 99.95 |
| **2M-12X** 2m 12 el beam, 21' beam, 13.4 db .. | 116.00 | 106.95 |
| **2M-13LBA** 2m 13 el beam, 21.5' bm, 13.3db | 125.00 | 114.95 |
| **2M-14C** 2m circ 14 el beam, 12.9'bm, 11db/CS3 | 211.00 | 179.95 |
| **2M-14CM** 2m circ 14 el beam, no switcher ... | 169.00 | 139.95 |
| **2M-15X** 2m 15 el beam, 28' boom, 14.8 db ... | 215.00 | 189.95 |
| **2M-16LBXM** 2m 16 el beam, 28' boom, 14.5db . | 244.00 | 209.95 |
| **2M-20LBX** 2m 20 el beam, 38.5' boom ..... | 316.00 | 269.95 |
| **2M-22C** 2m circ 22el beam, 19'bm, 13db/CS3 | 265.00 | 229.95 |
| **2M-22CM** 2m circ 22 el beam, no switcher ... | 237.00 | 199.95 |
| **JV-2** 2m 5' vertical antenna, 3 db .....Δmwfv | 131.00 | 89.95 |
| **JV-2X** 2m 11' vertical antenna, 5 db Δmwfcv | 181.00 | 119.95 |
| **220-7** 220 7 el beam, 4.75' bm, 8.8 db ..... | 98.00 | 89.95 |
| **220-14X** 220 14 el beam, 14.5' bm, 13.5db .. | 142.00 | 124.95 |
| **220-22LBX** 220 22el beam, 29.75'bm, 15.6db . | 178.00 | 154.95 |
| **JV-220X** 220 7' vertical ant, 5 db .....Δmwcv | 168.00 | 69.95 |
| **432-20LBX** 432 20 el, 12.33'bm, 15.3db Δmwfv | 189.00 | 139.95 |
| **432-30LBX** 432 30 el beam, 22'bm, 17.3db .. | 222.00 | 194.95 |
| **435-18C** 432 cir 18el, 7'bm, 12db/CS2 ..... | 267.00 | 239.95 |
| **435-18CM** 432 circ 18 el beam, no switcher . | 186.00 | 169.95 |
| **435-40CX** 432 circ 40el beam, 15'bm, 15.2db/CS2 | 309.00 | 269.95 |
| **435-40CXM** 432 circ 40 el beam, no switcher | 221.00 | 199.95 |
| **440-6X** 440 6 el beam, 2.33' boom, 8.9 db ... | 65.00 | 59.95 |
| **440-10X** 440 10 el beam, 5.33' bm, 11.2 db . | 82.00 | 74.95 |
| **440-16X** 440 16 el beam, 10.33'bm, 14.2db . | 142.00 | 124.95 |
| **1.2-15LBX** 1.2 GHz 15 el beam ..... | 127.00 | 114.95 |
| **1.2-24LBX** 1.2 GHz 24 el beam ..... | 155.00 | 139.95 |

## KLM - continued

| | Reg | Sale |
|---|---|---|
| **1.2-44LBX** 1.2GHz 44el beam, 12'bm, 18.2db | 200.00 | 179.95 |
| **CS-2** 432 antenna circularity switch ..... | 85.00 | 79.95 |
| **CS-3** 2m antenna circularity switch ..... | 55.95 | |
| **LO-With** Large set: 2M22C/43540CX/7½' mast | 585.00 | 499.95 |
| **LO-Without** Large set: 2M22CM/43540CXM/mast | 462.00 | 399.95 |
| **SO-With** Small set: 2M14C/43518C/5' mast . | 462.00 | 399.95 |
| **SO-Without** Small set: 2M14CM/43518CM/mast | 364.00 | 319.95 |

### FIBERGLASS MASTS

| | | |
|---|---|---|
| **5'** 1½" OD fiberglass **mast** ..... | $ 40.00 | 29.95 |
| **7-1/2'** 1½" OD fiberglass **mast** ..... | 50.00 | 44.95 |

### COUPLERS/POWER DIVIDERS

| | | |
|---|---|---|
| **440-2N** 432 MHz - for 2 ants, w/type N ..... | $ 81.95 | |
| **440-4N** 432 MHz - for 4 ants, w/type N ..... | 91.95 | |

### FERRITE BALUNS

| | | |
|---|---|---|
| **3-60-1:1** 3-60 MHz 4kw PEP 1:1 balun .Dmwf | $ 55.95 | 39.95 |
| **3-60-4:1** 3-60 MHz 5kw PEP 4:1 balun .Dmwfc | 62.95 | 49.95 |
| **50-150-1:1** 50-150MHz 500w PEP 1:1 bln Dmw | 56.00 | 19.95 |

***These antennas are drop-shipped (shipped direct to you from the KLM factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Monroe, Washington via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order antennas.**

## KANTRONICS (KAN)

| | | |
|---|---|---|
| **Data Engine** TNC w/no modems .....Dmwv | $319.95 | 269.95 |
| **Data Engine w/**DE-1200 modem .....Dmwfv | 389.95 | 329.95 |
| **DE-1200** 1200 baud modem .....Dmwv | 89.95 | 69.95 |
| **DE-19K2/9K6** 19.2/9600 baud modem Dmwfv | 109.95 | |
| **KPC-3 Plus/128K** Small packet TNC/128K RAM | 139.95 | |
| **KPC-3 Plus User**'s Guide (comes w/KPC3+) | 14.95 | |
| **KPC-9612 Plus** 9600 baud controller/32K ..... | 289.95 | 269.95 |
| KPC-**9612 Plus/128K** 9600 controller/128K ... | 309.95 | 289.95 |
| **128K** 128K memory upgrade; KPC-3/9612 .. | 24.95 | |
| **KAM Plus** All Mode Communicator ..... | 349.95 | 299.95 |
| **12VDC Adaptor** 300ma adapt; KAM Plus/KPC3 | 9.95 | |
| **Host Master II+** IBM software ..... | 89.95 | |
| **Host Master Mac** Macintosh software ..... | 89.95 | |
| **PC Combo** Software for IBM .....Dmv | 49.95 | 4.95 |
| **Pactor** Eprom option; KAM (**pre**-V5) .....Dm | 79.95 | 39.95 |
| **Package 1** Enhancement board; KAM w/8.0E | 109.95 | |
| **Package 2** 8.0E upgrade; KAM enhance brd .. | 39.95 | |
| **Package 3** 8.0P upgrade; KAM Plus ..... | 39.95 | |
| **Superfax II** WX FAX program for IBM ..... | 49.95 | |
| **APRS adapter** cable; GPS to Kantronics TNC .. | 29.95 | |
| **G-TOR Book** ..... | 19.95 | |
| **Pager Handbook** for the Radio Amateur ..... | 14.95 | |

## KENWOOD (KEN)

| | | |
|---|---|---|
| **TS-950SDX** Dlx Xcvr w/keyer/DSP/filters ..... | 5299.95 | 3999.95 |
| **DRU-2** Digital recording unit ..... | 149.95 | 139.95 |
| **IF-232C** Level translator ..... | 129.95 | 119.95 |
| **MC-43S** Extra 8-pin hand mic w/up-down .. | 59.95 | |
| **MC-60A** 8-pin amp desk mic w/up-down ... | 159.95 | 149.95 |
| **MC-80** 8-pin electret desk mic w/up-down . | 119.95 | 109.95 |
| **MC-90** 2-head DSP desk microphone ..... | 269.95 | 239.95 |
| **SP-950** External spkr w/audio filters ..... | 159.95 | 149.95 |
| **VS-2** Voice synthesizer ..... | 69.95 | |
| **YG-455CN-1** 250 Hz CW filter (2nd IF) ..... | 179.95 | 164.95 |
| **YK-88CN-1** 270 Hz CW filter (1st IF) ..... | 139.95 | 129.95 |
| **YK-88SN-1** 1.8 KHz SSB filter (1st IF) ..... | 139.95 | 129.95 |
| **TS-870S** 9-band Xcvr/SW Rcvr/IF-DSP/tuner . | 3199.95 | 2299.95 |
| **PS-40** Switching power supply ..... | 229.95 | 199.95 |
| **PS-40 power supply $99.95 with TS-870S thru 6/15/97** | | |
| **PS-52** Heavy duty power supply ..... | 309.95 | 269.95 |
| **DRU-3** Digital recording unit .....Dmwv | 139.95 | 129.95 |
| **DRU-3A** Digital recording unit ..... | 139.95 | 129.95 |
| **KSS** Sky command system; HT control 870S | 1177.85 | 999.95 |
| **MC-43S** Extra 8-pin hand mic w/up-down .. | 59.95 | |
| **MC-60A** 8-pin amp desk mic w/up-down ... | 159.95 | 149.95 |
| **MC-80** 8-pin electret desk mic w/up-down . | 119.95 | 109.95 |
| **MC-90** 2-head DSP desk microphone ..... | 269.95 | 239.95 |
| **SO-2** TCXO unit ..... | 189.95 | 179.95 |
| **SP-31** External speaker ..... | 99.95 | |
| **VS-2** Voice synthesizer ..... | 69.95 | |
| **RM-1** Remote control unit; TS-850S .....Dc | 59.95 | |

## KENWOOD - continued

| | Reg | Sale |
|---|---|---|
| **TS-570D** 9-band Xcvr/SW Rcv/AF-DSP/tune .. | 1749.95 | 1489.95 |
| **PS-40 power supply $99.95 with TS-570D thru 6/15/97** | | |
| **TS-570S** 9-band Xcvr/6m/Rcv/AF-DSP/tune .. | 2069.95 | 1749.95 |
| **PS-40 power supply $99.95 with TS-570S thru 6/15/97** | | |
| **PS-40** Switching power supply ..... | 229.95 | 199.95 |
| **PS-53** Heavy duty 22.5A power supply ..... | 289.95 | 249.95 |
| **DRU-3A** Digital recording unit ..... | 139.95 | 129.95 |
| **KSS** Sky command system; HT control 570D/S | 1177.85 | 999.95 |
| **MB-430** Mobile mounting bracket ..... | 49.95 | |
| **MC-43S** 8-pin hand mic w/up-down ..... | 59.95 | |
| **MC-60A** 8-pin amp desk mic w/up-down ... | 159.95 | 149.95 |
| **MC-80** 8-pin electret desk mic w/up-down . | 119.95 | 109.95 |
| **MC-90** 2-head DSP desk microphone ..... | 269.95 | 239.95 |
| **PG-2Z** Heavy duty DC cable ..... | 37.95 | |
| **SO-2** TCXO unit ..... | 189.95 | 179.95 |
| **SP-23** External speaker ..... | 89.95 | |
| **VS-3** Voice synthesizer ..... | 39.95 | |
| **YK-88C-1** 500 Hz CW filter ..... | 139.95 | 129.95 |
| **YK-88CN-1** 270 Hz CW filter ..... | 139.95 | 129.95 |
| **YK-88SN-1** 1.8 KHz SSB filter ..... | 139.95 | 129.95 |
| **TS-690S** 9-band Xcvr/6m/Rcvr/mic ..Dmwfcv | 1769.95 | 1299.95 |
| **PS-40** Switching power supply ..... | 229.95 | 199.95 |
| **PS-53** Heavy duty 22.5A power supply ..... | 289.95 | 249.95 |
| **AT-450** Internal 80-10m auto tuner ..... | 279.95 | 249.95 |
| **AT-50** External auto tuner ..... | 379.95 | 329.95 |
| **PG-4M** 18' extension cable for AT-50 ..... | 29.95 | |
| **IF-232C** Level translator ..... | 129.95 | 119.95 |
| **MB-430** Mobile mounting bracket ..... | 49.95 | |
| **MC-43S** Extra 8-pin hand mic w/up-down .. | 59.95 | |
| **MC-60A** 8-pin amp desk mic w/up-down ... | 159.95 | 149.95 |
| **MC-80** 8-pin electret desk mic w/up-down . | 119.95 | 109.95 |
| **MC-90** 2-head DSP desk microphone ..... | 269.95 | 239.95 |
| **PG-2Z** Heavy duty DC cable ..... | 37.95 | |
| **SO-2** TCXO unit ..... | 189.95 | 179.95 |
| **SP-23** External speaker ..... | 89.95 | |
| **TU-8** CTCSS tone unit ..... | 54.95 | |
| **VS-2** Voice synthesizer ..... | 69.95 | |
| **YG-455C-1** 500 Hz CW filter (2nd IF) ..... | 169.95 | 159.95 |
| **YG-455CN-1** 250 Hz CW filter (2nd IF) ..... | 179.95 | 164.95 |
| **YK-88C-1** 500 Hz CW filter (1st IF) ..... | 139.95 | 129.95 |
| **YK-88CN-1** 270 Hz CW filter (1st IF) ..... | 139.95 | 129.95 |
| **YK-88S-1** 2.4 KHz SSB filter (1st IF) ..... | 139.95 | 129.95 |
| **YK-88SN-1** 1.8 KHz SSB filter (1st IF) ..... | 139.95 | 129.95 |
| **TS-50S** Compact HF Xcvr/SW Rcvr/mic/mt .... | 1169.95 | 849.95 |
| **PS-40 power supply $99.95 with TS-50S thru 6/15/97** | | |
| **TS-60S** Compact 6m Xcvr/mic/mt ..... | 1199.95 | 999.95 |
| **PS-40** Switching power supply ..... | 229.95 | 199.95 |
| **PS-40 power supply $99.95 with TS-60S thru 6/15/97** | | |
| **PS-53** Heavy duty 22.5A power supply ..... | 289.95 | 249.95 |
| **AT-50** External HF auto tuner ..... | 379.95 | 329.95 |
| **PG-4M** 18' extension cable for AT-50 ..... | 29.95 | |
| **IF-10D** Computer interface ..... | 89.95 | |
| **IF-232C** Level translator ..... | 129.95 | 119.95 |
| **MB-13** Deluxe quick release mtg bracket ... | 55.95 | |
| **MC-47** Extra multi-func 8-pin hand mic .... | 59.95 | |
| **MC-60A** 8-pin amp desk mic w/up-down ... | 159.95 | 149.95 |
| **MC-80** 8-pin electret desk mic w/up-down . | 119.95 | 109.95 |
| **PG-2Y** DC cable ..... | 39.95 | |
| **SO-2** TCXO unit ..... | 189.95 | 179.95 |
| **SP-23** External speaker ..... | 89.95 | |
| **TC-50**/50Case Travel case for TS-50S/60S . | 89.95 | |
| **YK-107C** 500 Hz CW filter ..... | 139.95 | 129.95 |
| **YK-88A-1** AM filter; R-5000 ..... | 104.95 | 99.95 |
| **YK-88C** 500 Hz CW filter; R-5000 ..... | 139.95 | 129.95 |
| **YK-88CN** 270 Hz CW filter; R-5000 ..... | 104.95 | 99.95 |
| **YK-88SN** 1.8 KHz SSB filter; R-5000 ..... | 139.95 | 129.95 |
| **YK-455C-1** 500 Hz CW filter; TS-140S Δmwfv | 114.95 | 99.95 |
| **HS-5** Deluxe headphones ..... | 79.95 | |
| **HS-6** Lightweight headphones ..... | 59.95 | |
| **LF-30A** 1kw PEP low pass filter ..... | 64.95 | |
| **MA-5** 5-band 200w PEP HF mob ant .Δmwfcv | 189.95 | 149.95 |
| **VP-1** Hvy duty chrome spg, bpr mt .Δmwfcv | 64.95 | 49.95 |
| **MC-43S** 8-pin hand mic w/up-down switch .. | 59.95 | |
| **MC-60A** 8-pin amp desk mic w/up-down ..... | 159.95 | 149.95 |
| **MC-80** 8-pin electret desk mic w/up-down .... | 119.95 | 109.95 |

## KENWOOD - continued

| | Reg | Sale |
|---|---|---|
| **MJ-64** 6-pin mic to 4-pin Xcvr adapt .....Dm | 14.95 | 95¢ |
| **E30-1765-08** Adapt cord; MC-85 - 8-pin Xcvr | 21.95 | |
| **PC-1A** 8-pin phone patch | 139.95 | 129.95 |
| **PG-3B** 15A DC line noise filter | 29.95 | |
| **PG-3G** 25A DC line noise filter | 51.95 | |
| **SP-41** Compact external speaker | 49.95 | |
| **SP-50B** High quality external mobile speaker | 55.95 | |
| **SW-2100** 1.8-30MHz 2kw SWR/power meter .. | 174.95 | 159.95 |
| **TU-7** Prog encoder; TR-751A .....Δm | 54.95 | |
| **TM-255A** 40w 2m SSB/FM Xcvr/9600 baud ... | 1109.95 | 929.95 |
| **DFK-3** 9' separate display cable kit | 26.95 | |
| **DFK-4** 13' remote cable kit | 59.95 | |
| **DFK-7A** Deluxe 22' remote cable kit | 99.95 | 89.95 |
| **PG-5A** Packet data cable | 15.95 | |
| **TSU-8** CTCSS decoder | 59.95 | |
| **TS-790A** 45w 2m/40w 440 SSB/FM Xcvr/mic . | 2199.95 | 1849.95 |
| **IF-232C** Level translator | 129.95 | 119.95 |
| **MC-43S** Extra 8-pin hand mic w/up-down .. | 59.95 | |
| **MC-60A** 8-pin amp desk mic w/up-down ... | 159.95 | 149.95 |
| **MC-80** 8-pin electret desk mic w/up-down . | 119.95 | 109.95 |
| **PG-2Z** Heavy duty DC cable | 37.95 | |
| **SP-31** External speaker | 99.95 | |
| **TSU-5** Programmable CTCSS decoder | 64.95 | |
| **UT-10** 10w 1.2 GHz module | 629.95 | 539.95 |
| **VS-2** Voice synthesizer | 69.95 | |
| **TM-642A** 2m/220 FM Xcvr w/TTP .....Dmf | 959.95 | 729.95 |
| **TM-642AD** 2m/220 FM Xcvr/backlit TTP mic .. | 989.95 | 739.95 |
| **TM-742AD** 50/35w 2m/440 FM/backlit TT mic † | 959.95 | 599.95 |
| **MFJ 916 duplexer FREE with TM-742AD! Limited Time!** | | |
| **DFK-3** 9' separate display cable kit | 26.95 | |
| **DFK-4** 13' remote cable kit | 59.95 | |
| **DFK-7** Deluxe 22' remote cable kit | 89.95 | |
| **MJ-88** Modular to 8-pin mic adapter | 30.95 | |
| **MJ-89** Modular mic switch | 69.95 | |
| **TSU-7** CTCSS decoder unit | 59.95 | |
| **UT-28S** 50w 10m unit .....Dmwfcv | 339.95 | 149.95 |
| **UT-50S** 50w 6m unit | 379.95 | 329.95 |
| **UT-220S** 25w 220 MHz unit | 379.95 | 329.95 |
| **UT-440S** 35w 440 MHz unit | 339.95 | 299.95 |
| **UT-1200** 10w 1.2 GHz unit | 459.95 | 399.95 |
| **DFK-3B** 9' separate display cable kit | 39.95 | |
| **DFK-4B** 13' remote cable kit | 60.95 | |
| **DFK-7B** Deluxe 22' remote cable kit | 99.95 | |
| **TM-V7A** 50w 2m/35w 440 FM Xcvr/TTP mic ... | 719.95 | 549.95 |
| **DFK-3C** 9' separate display cable kit | 44.95 | |
| **DFK-4C** 13' remote cable kit | 64.95 | |
| **DFK-7C** Deluxe 23' remote cable kit | 99.95 | |
| **MJ-88** Modular to 8-pin mic adapter | 30.95 | |
| **MJ-89** Modular mic switch | 69.95 | |
| **PG-5A** Packet data cable | 15.95 | |
| **VS-3** Voice synthesizer | 39.95 | |
| **MA-700** 3db 2m/5.5db 440 ant w/duplexer ... | 109.95 | 99.95 |
| Larsen **PO-K** Roof mt, coax; MA-700 | 24.95 | |
| Larsen **PO-MM** Magnet mt, coax; MA-700 ... | 31.95 | |
| Larsen **PO-TLM** Trunk lip mt, coax; MA-700 | 27.95 | |
| **TM-331A** 25w 220 FM Xcvr w/TTP mic | 579.95 | 499.95 |
| **DTU-2** Digital paging unit | 32.95 | |
| **KQT-8**/TSU-6 Prog CTCSS decoder | 49.95 | |
| **MC-44DM** Extra multi-function TTP mic | 79.95 | |
| **TM-451A** 35w 440 FM/TTP/9600 baud Dmwcv | 599.95 | 479.95 |
| **MC-45DM** Extra multi-function TTP mic ...† | 79.95 | 39.95 |
| **ME-1** Memory expansion | 39.95 | |
| **PG-5A** Packet data cable | 15.95 | |
| **TSU-8** CTCSS decoder | 59.95 | |
| **TM-261A** 50w 2m FM Xcvr w/TTP mic | 379.95 | 269.95 |
| **TM-461A** 35w 440 FM Xcvr w/TTP mic | 509.95 | 439.95 |
| **TSU-8** CTCSS decoder | 59.95 | |
| **MC-52DM** Back-lit TTP mic;241/331/441/541 † | 79.95 | 59.95 |

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**1-800-327-1917**


## KENWOOD - continued

| | Reg | Sale |
|---|---|---|
| **MC-53DM** Back-lit TTP mic;251/733/742/255/V7A † | 79.95 | 59.95 |
| **Accessory: TH-A/B/2600A/3600A/2500/3500** | | |
| **RA-9B** 220 BNC stubby duck .....Dm | $ 18.95 | 2.95 |
| **Accessory for TH-225A/315A/415A/205AT** | | |
| **SC-27** Soft case for TH-225A w/PB-12 .....Dm | $ 19.50 | 49¢ |
| **Accessories for TH-75A/77A/25AT/26AT** | | |
| **BT-6** 6-AA battery case .....Dmwfc | $ 29.95 | |
| **KNB-5A** 800ma 7.2v battery | 63.95 | |
| **KNB-7A** 800ma 12v (5w) batt (not 55AT) | 87.95 | |
| **KQT-8**/TSU-6 CTCSS encoder/decoder | 49.95 | |
| **PG-3E** Cig cord w/filter for DC-1 .....Dmwfcv | 35.95 | |
| **Accessory for TH-27A/47A** | | |
| **TH-28A** 2.5w 2m FM HT/batt/cgr/TTP | $399.95 | 279.95 |
| **TH-48A** 2w 440 FM HT/batt/cgr/TTP ....Dmwfv | 469.95 | 259.95 |
| **Accessories for TH-28A/48A/78A** | | |
| **BC-15A** Rapid cgr; PB-13/14/17/18 ..Dmwfcv | $119.95 | 49.95 |
| **BH-6** Swivel mount | 39.95 | |
| **BT-8** AA alkaline battery case | 29.95 | |
| **EMC-3** Lapel clip mic/ear piece | 43.95 | |
| **HMC-3** VOX/boom mic headset | 72.95 | |
| **ME-1** Memory expansion | 39.95 | |
| **PB-14** 300ma 12v (5w) battery .....Dmfc | 90.95 | 69.95 |
| **PB-17** 700ma 12v (5w) battery | 99.95 | |
| **PB-18** 1100ma 7.2v battery | 89.95 | |
| **PG-2W** DC cable w/fuse | 17.95 | |
| **PG-3J** Cig lighter cord w/filter | 36.95 | |
| **SC-33** Small soft case; 28A/48A | 24.95 | |
| **SC-34** Large soft case; 28A/48A | 24.95 | |
| **SC-35** Regular soft case; 78A .....Dmv | 24.95 | 9.95 |
| **SC-36** Large soft case; 78A .....Dmf | 24.95 | 9.95 |
| **SMC-32** Mini water resistant rt angle spkr/mic . | 52.95 | |
| **SMC-33** Speaker/mic w/remote control | 65.95 | |
| **SMC-34** Spkr/mic w/vol cont & function keys | 67.95 | |
| **WR-2** Water resistant bag | 29.95 | |
| **TH-22AT** 3w 2m FM HT/batt/cgr/TTP | 299.95 | 249.95 |
| **TH-22ATH** 5w 2m FM HT/batt/KSC-8A/TTP | 324.95 | 279.95 |
| **TH-42AT** 2.5w 440 FM HT/batt/cgr/TTP | 399.95 | 339.95 |
| **TH-79A(D)** 2.7w 2m/440 HT/batt/cgr/TTP | 549.95 | 389.95 |
| **TH-79A(D)H** 5w 2m/440 HT/batt/cgr/TTP | 579.95 | 419.95 |
| **BH-6** Swivel mount | 39.95 | |
| **BT-9** 4-AA battery holder | 29.95 | |
| **EMC-1** Lapel clip mic/ear piece .....Dmwcv | 43.95 | |
| **EMC-3** Lapel clip mic/ear piece | 43.95 | |
| **HMC-3** VOX/boom mic headset | 72.95 | |
| **KSC-8A** Drop-in cgr; 25/26/75/77/22/79 | 26.95 | |
| **KSC-14** 2-pack rapid charger | 87.95 | |
| **PB-32*** 600ma 6v battery .....† | 66.95 | 29.95 |
| *** $19.95 with purchase of any radio! Limited Time!** | | |
| **PB-33** 1200ma 6v battery | 89.95 | |
| **PB-34** 600ma 9.6v (5w) battery | 89.95 | |
| **PG-2W** DC cable w/fuse | 17.95 | |
| **PG-3J** Cig lighter cord w/filter | 36.95 | |
| **RA-3** 2m BNC ⅜ wave telescopic ant .....Dm | 25.95 | 19.95 |
| **SC-37** Soft case; TH-22/42AT/PB-30/32 | 24.95 | |
| **SC-39** Soft case; TH-22/42AT w/PB-33/34 . | 24.95 | |
| **SC-41** Soft case; TH-79A(D) w/PB-32 | 24.95 | |
| **SC-43** Soft case; TH-79A(D) w/PB-33/34 | 24.95 | |
| **SMC-32** Mini water resist rt angle spkr/mic | 52.95 | |
| **SMC-33** Speaker/mic w/remote control | 65.95 | |
| **SMC-34** Spkr/mic w/vol cont/function keys | 67.95 | |
| **TSU-8** CTCSS decoder; TH-22/42AT | 59.95 | |
| **WR-2** Water resistant bag; TH-22/42AT | 29.95 | |
| **TH-235A** 1.5w 2m FM FM/batt/cgr/TTP | 229.95 | 179.95 |
| **TH-235AH** 5w 2m FM FM/batt/desk cgr/TTP | | 199.95 |
| **TH-235AK2** 2m HT; **no batt or cgr** ....Δmwfcv | 199.95 | 149.95 |
| **BT-10** 6 AA alkaline battery case | 13.95 | |
| **EMC-3** Lapel clip mic/ear piece | 43.95 | |
| **HMC-3** VOX/boom mic headset | 72.95 | |
| **KSC-8A** Drop-in cgr; 25/26/75/77/22/79 | 26.95 | |
| **KSC-14** 2-pack rapid charger | 87.95 | |
| **PB-36** 7.2v 950ma nicad battery | 42.95 | |
| **PB-37** 12v 950ma (5w) nicad battery | 57.95 | |
| **PG-2W** DC cable w/fuse | 17.95 | |
| **PG-3J** Cig lighter cord w/filter | 36.95 | |
| **SMC-32** Mini water resist rt angle spkr/mic | 52.95 | |
| **SMC-33** Speaker/mic w/remote control | 65.95 | |
| **SMC-34** Spkr/mic w/vol cont/function keys | 67.95 | |

## KENWOOD - continued

| | Reg | Sale |
|---|---|---|
| **TSU-8** CTCSS decoder | 59.95 | |
| **WR-2** Water resistant bag | 29.95 | |
| **EZ-PASS DOS** No-code tech study package ... | 34.95 | |
| **EZ-PASS WIN 95** No-code tech study package | 34.95 | |
| **Primer** Welcome to Amateur Radio primer .... | 2.00 | 50¢ |

# LARSEN (LAR)

| | | |
|---|---|---|
| **27-31 MHz ANTENNAS** | | |
| **NMO-27C** 10m ant only (no mount) | $ 33.50 | 29.95 |
| **47-54 MHz ANTENNAS** | | |
| **NMO-50C** 6m ant only (no mount) | $ 33.50 | 29.95 |
| **144-174 MHz ANTENNAS** | | |
| **NMO-150B** 2m black ant only (no mt), 3 db .. | $ 33.20 | 29.95 |
| **NMO-150C** 2m ant only (no mount), 3 db | 30.70 | 27.95 |
| **220-265 MHz ANTENNAS** | | |
| **NLA-220** 220 ant only (no mt), 3 db .....Dv | $ 36.35 | 14.95 |
| **NMO-220C** 220 ant only (no mount), 3 db | 30.00 | 26.95 |
| **440-460 MHz ANTENNAS** | | |
| **NMO-440B** 440 black ant only (no mt), 5 db . | $ 35.80 | 32.95 |
| **NMO-440C** 440 ant only (no mount), 5 db | 29.30 | 26.95 |
| **OM-440-K** 440 no gnd plane ant, 2 db ....Dmf | 52.15 | 12.95 |
| **MM-2/70** 2m/440 ¼ wave/2db mag mt ant | 42.00 | 37.95 |
| **NMO-2/70B** 2m/440 blk ant only (no mt), 2/4db | 53.00 | 47.95 |
| **NMO-2/70C** 2m/440 ant (no mount), 2/4db | 48.50 | 43.95 |
| **NMO-2/70-SH** 2m/440 ant (no mt), ¼ wv/2db | 37.83 | 33.95 |
| **NMO-012** 135-160/148-173 2.5db ant (no mt) | 50.00 | 44.95 |
| **NMOQ-Spec** 136-512 MHz ¼ wave ant (no mt) . | 9.95 | |
| **NMOQ-Spec-B** 136-512 black ¼ wv ant (no mt) | 13.95 | |
| **NMOQ-Spec-K** 136-512MHz ¼ wv ¾" hole ant . | 23.95 | |
| **NMOQ-2/70-B** 2m/440 ¼ wv cell look ant (no mt) | 31.95 | |
| **NMO-1290B** 1.2 GHz black ant only (no mt) .. | 32.00 | 28.95 |
| **FB1-136** Base station 136-230 MHz ant | 137.80 | 124.95 |
| **ON GLASS ANTENNAS** | | |
| **KG-144-UD-PL** 2m 3 db on glass antenna | $ 67.30 | 60.95 |
| **KG-220-UD-PL** 220 3 db on glass antenna | 67.30 | 60.95 |
| **KG-440-UD-PL** 440 2.4 db on glass antenna | 54.70 | 49.95 |
| **KG-2/70-UD-PL** 2m/440 2.5/4.5db on glass .. | 91.80 | 82.95 |
| **KG-Reinstall** Reinstall kit for KG-ants | 5.95 | |
| **KULDUCKIES - For Hand-helds** | | |
| **KD4-146** 2m BNC Kulduckie | $ 17.95 | |
| **KD4-2/70** 2m/440 BNC Kulduckie | 27.95 | |
| **KD4-222** 220 BNC Kulduckie | 17.95 | |
| **KD14-445** 440 ¼ wave BNC Kulduckie | 17.95 | |
| **KD4-146-HQ** 2m part helical, part ¼ wave BNC . | 21.95 | |
| **KD14-2M-HW** 2m ½ wave BNC antenna | 33.95 | |
| **KD14-440-HW** 440 ½ wave BNC antenna | 33.95 | |
| **ACCESSORIES & REPLACEMENT PARTS** | | |
| **A-7** Adapter for NMO antenna on NLA mount | $ 8.95 | |
| **AD-2/70** 100w 2m/440 duplexer | 69.20 | 62.95 |
| **NMO-150-CO** Extra coil for NMO-150 .....Dw | 20.25 | 12.95 |
| **NMO-CAP-B** Black rain cap for NMO mount ... | 3.95 | |
| **NMO-K** ¾" hole mt w/coax for NMO ant | 13.95 | |
| **NMO-MM** Magnet mt, coax for NMO ant | 29.95 | |
| **NMO-TLP** Low profile tnk lid mt, coax; NMO ant | 26.95 | |
| **PO-K** Roof mt, coax for SO-239 ant | 24.95 | |
| **PO-MM** Magnet mt, coax for SO-239 ant | 31.95 | |
| **PO-TLM** Trunk lip mt, coax for SO-239 ant | 27.95 | |
| **RG-NLA** Extra NLA rubber gaskets (3) .....Dm | 2.10 | 99¢ |
| **RG-SS** Extra super seal NMO gaskets (3) | 3.95 | |
| **SPRING** Shock spring | 6.95 | |
| **TMB-34** Trunk mtg bkt for NMO antenna | 4.95 | |
| **TMB-34B** Black trunk mtg bkt for NMO ant | 6.95 | |
| **W-154** Extra closed coil whip; 440 ant ....Δwv | 17.80 | 4.95 |
| **W-490** 49" whip | 9.95 | |
| **W-490B** Black 49" whip | 12.95 | |

# LOGSAT (LOG)

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|---|---|
| **Logsat Professional** Satellite tracking CDROM | $ 69.95 |

# MFJ ANTENNA TUNERS (MFJ)

| | | |
|---|---|---|
| **989C** Dlx 3kw PEP w/roller inductor | $349.95 | 299.95 |
| **986** 3kw PEP w/roller inductor | 299.95 | 269.95 |
| **962C** 1.5kw PEP/meter/switch/balun | 249.95 | 229.95 |
| **969** HF & 6m 300w roller inductor tuner | 179.95 | 169.95 |
| **949E** 300w/meter/dummy/sw/balun | 149.95 | 139.95 |

## MFJ - continued

| | Reg | Sale |
|---|---|---|
| **1312C** 12vdc 300ma ps 2.5mm coaxial; 949E | 12.95 | |
| **948** 300w/meter/switch/balun | 129.95 | 119.95 |
| **941E** 300w tuner w/meter, switch, balun | 109.95 | 99.95 |
| **945E** 300w tuner w/meter plus 6m | 99.95 | 89.95 |
| **20** Mobile bracket for 945D | 4.95 | |
| **901B** Versa Tuner 200w ant tuner | 69.95 | |
| **910** 80-10m mobile antenna matcher | 19.95 | |
| **16010** 200w random wire tuner | 39.95 | |
| **903** 6m antenna tuner | 49.95 | |
| **906** 6m antenna tuner w/wattmeter | 79.95 | 74.95 |
| **914** Auto tuner extender | 59.95 | |
| **921** 2m/220 300w PEP tuner/SWR/wattmeter | 69.95 | |
| **924** 440 MHz 300w PEP tuner/SWR/wattmeter | 69.95 | |
| **934** 300w tuner w/artificial ground | 169.95 | 159.95 |
| **MEMORY KEYERS** | | |
| **451** Dedicated CW keyboard w/memory | $ 99.95 | 89.95 |
| **451X** Morse keyboard interface only | 79.95 | 74.95 |
| **452** CW keyboard/keyer w/disp/keyboard | 129.95 | 119.95 |
| **452X** CW keyboard/keyer w/disp, no keyboard | 99.95 | 89.95 |
| **498** Dlx CW keyboard/keyer w/disp/keyboard | 179.95 | 169.95 |
| **498X** Dlx CW keyboard w/disp, no keyboard | 159.95 | 149.95 |
| **490** 492 keyer/Bencher paddle combination | 164.95 | 149.95 |
| **490X** 492 keyer for use w/Bencher or 564 | 109.95 | 99.95 |
| **564** Deluxe iambic paddle for 490X | 49.95 | |
| **492** 192 char menu driven memory keyer | 99.95 | 89.95 |
| **80** 8000 char memory expansion for 492 | 14.95 | |
| **492X** Memory keyer w/8000 char expansion | 114.95 | 104.95 |
| **78** Remote control for 492/492X | 19.95 | |
| **493** 32K char menu driven mem keyer | 139.95 | 129.95 |
| **79** Remote control for 493 | 19.95 | |
| **551** IBM AT-101 keyboard for 493 | 39.95 | |
| **5409** 493 9-pin serial port 6' cable | 12.95 | |
| **5425** 493 25-pin serial port 6' cable | 12.95 | |
| **ELECTRONIC KEYERS** | | |
| **407C** Deluxe electronic keyer | $ 69.95 | 64.95 |
| **401C** Econo keyer | 49.95 | |
| **KEYER/PADDLES** | | |
| **422C** Keyer/Bencher paddle combination | $134.95 | 124.95 |
| **422CX** Keyer only | 79.95 | 74.95 |
| **441** SlimLine econo keyer | 59.95 | |
| **442** SlimLine keyer/Bencher paddle combo | 144.95 | 134.95 |
| **442X** SlimLine keyer only | 89.95 | 82.95 |
| **447** SlimLine deluxe keyer | 79.95 | 74.95 |
| **564** Deluxe iambic chrome paddle | 49.95 | |
| **564B** Deluxe iambic black paddle | 49.95 | |
| **COMPUTER INTERFACES** | | |
| **1224** Interface | $ 99.95 | 94.95 |
| **1264** Tape software for VIC/C64; 1224 ...Δf | 19.95 | 6.95 |
| **1265** Disk software for VIC/C64; 1224 | 19.95 | |
| **1285** Software for IBM; 1224 | 19.95 | |
| **1225** Receive only interface ...Δmwf | 69.95 | 49.95 |
| **1264B** Tape software; VIC/C64; 1225 ....Δf | 19.95 | 2.95 |
| **1265B** Disk software; VIC/C64; 1225 ....Δf | 19.95 | 2.95 |
| **1285B** Software for IBM; 1225 ...Δmw | 19.95 | 14.95 |
| **1270C** Packet radio TNC2 | 119.95 | 109.95 |
| **47A** Mailbox 32K mem; 1270/1274 ....Δmw | 49.95 | 39.95 |
| **47B** Mailbox 128K mem; 1270/1274 ..Δmwv | 69.95 | 49.95 |

## MFJ - continued

| | Reg | Sale |
|---|---|---|
| **47C** Mailbox 512K mem; 1270/1274 ...Δmw | 149.95 | 119.95 |
| **2400** 2400 baud modem | 29.95 | |
| **9600B** 9600 baud modem | 109.95 | 99.95 |
| **1270CT** Turbo packet w/2400 baud | 149.95 | 139.95 |
| **1270CQ** Packet w/9600 baud modem | 229.95 | 199.95 |
| **1276** Packet/Pactor controller | 139.95 | 129.95 |
| **1276T** Packet/Pactor Turbo controller | 169.95 | 159.95 |
| **1278B** Multi-mode controller w/Pactor | 299.95 | 269.95 |
| **1278B/DSP** Controller w/Pactor & DSP | 379.95 | 349.95 |
| **45A** 32K RAM IC only ...Δmw | 14.95 | 11.95 |
| **45C** 512K RAM IC only ...Δmw | 99.95 | 74.95 |
| **48** 1278 upgrade | 24.95 | |
| **48B** 1278B upgrade | 24.95 | |
| **48E** 1278 packet encryption EPROM .....Δm | 29.95 | 22.95 |
| **52** TNC2 deviation meter board | 29.95 | |
| **56A** Pactor/mailbox 32K board for 1278B | 69.95 | |
| **56B** Pactor/mailbox 128K board for 1278B | 89.95 | |
| **56C** Pactor/mailbox 512K board; 1278B | 149.95 | 139.95 |
| **780** DSP data filter for 1278B | 99.95 | 89.95 |
| **2400** 2400 baud modem | 29.95 | |
| **9600B** 9600 baud modem | 109.95 | 99.95 |
| **1278BT** Turbo controller/2400 baud/Pactor | 329.95 | 299.95 |
| **1282** C64 starter pack | 24.95 | |
| **1282B** Multicom package; C64/128 | 39.95 | |
| **1282BD** Multicom 64 disk only ...Δmwf | 29.95 | 22.95 |
| **1284** 5¼" IBM starter pack | 24.95 | |
| **1284D** 1284 disk only | 14.95 | |
| **1284M** 3½" IBM starter pack | 24.95 | |
| **1284MD** 1284M disk only | 14.95 | |
| **1284W** MFJCOM for Windows | 29.95 | |
| **1287** Macintosh starter pack | 24.95 | |
| **1287B** Mac multicom starter pack | 49.95 | |
| **1287D** 1287 disk only ...Δmf | 14.95 | 11.95 |
| **1287BD** 1287B disk only ...Δmfv | 39.95 | 29.95 |
| **1288** Packet terminal program | 9.95 | |
| **1289** 5¼" multicom software for IBM | 59.95 | |
| **1289D** 1289 disks only | 49.95 | |
| **1289M** 3½" multicom software for IBM | 59.95 | |
| **1289MD** 1289M disks only | 49.95 | |
| **1289W** Multicom for Windows with cable | 59.95 | |
| **1289WD** Multicom for Windows, less cable | 49.95 | |
| **1293** JVFax/HamCom soft/FJ-1213 ...Dmfcv | 9.95 | |
| **1214PC** Multimode interface for IBM | 149.95 | 139.95 |
| **59M** 1214 3½" software upgrade | 29.95 | |
| **40B** TNC2 upgrade 32K/RAM ...Δmw | 29.95 | 22.95 |
| **40C** TNC2 upgrade 32K | 19.95 | |
| **40E** TNC2 packet encryption EPROM .....Δmw | 29.95 | 22.95 |
| **43** Real time clock for TNC | 19.95 | |
| **44** Plug-in scope tuning adapter .....Δmwfv | 19.95 | 14.95 |
| **44X** Scope tune adapt; 1278 & others .....Δfv | 49.95 | |
| **52B** FM deviation/temp/volt meter for TNC | 39.95 | |
| **1271** Packet card for C64/128 | 49.95 | |
| **1272B** TNC to microphone interface | 39.95 | |
| **1272BX** TNC/mic switch; PK-232 | 39.95 | |
| **1272BYH** TNC/mic switch; KAM HF | 39.95 | |

## MFJ - continued

| | Reg | Sale |
|---|---|---|
| **1272BYV** TNC/mic switch; KAM VHF | 39.95 | |
| **1272BZ** TNC/mic switch; PK-88 | 39.95 | |
| **1272M** TNC/mic RJ-45 switch; MFJ/PK-900 | 39.95 | |
| **1272MX** TNC/mic RJ-45 switch; PK-232 | 39.95 | |
| **1272MYH** TNC/mic RJ-45 switch; KAM HF | 39.95 | |
| **1272MYV** TNC/mic RJ-45 sw; KAM VHF; KPC3 | 39.95 | |
| **1272MZ** TNC/mic RJ45 switch; PK88 Δmwfcv | 39.95 | 29.95 |
| **1273** Packet tuning indicator ...Dmf | 49.95 | 9.95 |
| **SSB/CW FILTERS** | | |
| **722** SSB/CW notch filter | $ 79.95 | 74.95 |
| **752C** Dual tunable SSB/CW filter | 99.95 | 89.95 |
| **781** DSP filter for any TNC or controller | 129.95 | 119.95 |
| **784B** Deluxe tuneable DSP filter | 249.95 | 229.95 |
| **5184** Cable pack for 784B | 7.95 | |
| **PHONE PATCH** | | |
| **624D** Phone patch w/audio VU meter | $109.95 | 99.95 |
| **DUMMY LOADS** | | |
| **250** 2kw PEP dummy load w/oil | $ 49.95 | |
| **250X** 2kw PEP dummy load, less oil | 29.95 | |
| **260BN** 300w 0-650 MHz N dry dummy ....Dwv | 34.95 | 29.95 |
| **260C** 300w 0-650 MHz dry dummy load | 29.95 | |
| **260CN** 300w 0-650 MHz type N dry dummy | 34.95 | |
| **264** 1.5kw 0-650 MHz dry dummy load | 59.95 | |
| **264N** 1.5kw 0-650 MHz type N dry dummy | 69.95 | |
| **SWR/WATTMETERS** | | |
| **812B** 144-220 MHz SWR/FS/wattmeter | $ 29.95 | |
| **815B** 160-6m cross-needle SWR/wattmeter | 69.95 | |
| **816** 1.8-30 MHz toroidal SWR/wattmeter | 29.95 | |
| **817** 2m/440 cross needle meter | 79.95 | 74.95 |
| **840** 2m 5w wattmeter/dummy load for HT | 19.95 | |
| **841** 2m 5w in-line HT wattmeter/SWR | 39.95 | |
| **860** 1.8-60 MHz cross-needle meter | 39.95 | |
| **862** 2m/220/440 cross-needle meter | 49.95 | |
| **864** 1.8-60MHz/2m/440 cross needle meter | 79.95 | |
| **SHORTWAVE ACCESSORIES** | | |
| **306** Car radio SWL converter | $ 79.95 | 74.95 |
| **956** LW/MW/SW preselector/tuner | 39.95 | |
| **959B** Receiver ant tuner w/preamp | 99.95 | |
| **1020B** .3-30 MHz indoor active rcv ant | 69.95 | |
| **1022** 300KHz-200MHz active rcv antenna | 39.95 | |

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|---|---|---|
| 1024 .05-30 MHz outdoor active rcv ant | 129.95 | 119.95 |
| 1040B Deluxe receiver preselector | 99.95 | |
| 1045C Receiver preselector ...Δmwfv | 69.95 | 49.95 |

### BOOKS

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|---|---|---|
| 30 Golden Classics book | $ 9.95 | |
| 31 Oscar book | 7.95 | |
| 32 Packet Made Easy book | 12.95 | |
| 33 Mobile Handbook book | 12.95 | |
| 35 World of Ham Radio book | 7.95 | |
| 36 Shortwave Listeners Guide; Apts/Condos | 9.95 | |
| 37 Ham Communications Circuit Files book | 9.95 | |
| 38 Easy-up Antennas book | 16.95 | |
| 3036 The Packet Radio Operators book | 12.95 | |
| 3101 Fox Hunt Adventure book | 7.95 | |
| 3210 Novice license guide | 7.95 | |
| 3211 Tech Plus license guide | 7.95 | |
| 3212 No code tech license guide | 14.95 | |
| 3213 General license guide | 7.95 | |
| 3214 Advanced license guide | 7.95 | |
| 3215 Extra license guide | 7.95 | |
| 3301 Troubleshooting Antenna & Feedlines book | 12.95 | |
| 3302 73 Dipole and Long-Wire Antennas | 12.95 | |
| 3303 73 Vertical, Beam, and Triangle Ants | 12.95 | |
| 3304 Technician Antenna Handbook ...Dmw | 9.95 | 4.95 |
| 3305 Antennas & Transmission Lines book | 19.95 | |
| 3502 Solid State QRP Projects | 12.95 | |
| 3504 FET Principles, Experiments & Projects | 16.95 | |
| 3506 Ferromagnetic-Core Design book | 19.95 | |

### ACCESSORIES

| | | |
|---|---|---|
| 1305 5vdc 300ma adapter | $ 12.95 | |
| 1312 12vdc 300ma adapter, 2.5mm plug | 12.95 | |
| 1312B 12vdc 300ma adapter, 2.1mm plug | 12.95 | |
| 1312C 12vdc 300ma adapter; 2.5mm coaxial | 12.95 | |
| 1315 12vdc 500ma adapter | 14.95 | |
| 9-102 MFJ 25th anniversary coffee mug | 3.95 | |
| 105B 24-hour quartz wall clock | 19.95 | |
| 107B 24-hour digital clock | 9.95 | |
| 108B 24/12-hour dual disp digital clock | 19.95 | |
| 112 Deluxe world map clock | 24.95 | |
| 114 Large LED 24-hour clock | 39.95 | |
| 116 24/12-hour LED clock/10 minute timer | 14.95 | |
| 201 1.5-150 MHz dip meter | 119.95 | 109.95 |
| 202B RF noise bridge | 59.95 | |
| 203 160-10m bandswitched dip meter | 99.95 | 89.95 |
| 204B Antenna bridge | 79.95 | 74.95 |
| 205 160-10m antenna resistance meter | 89.95 | 79.95 |
| 206 Antenna current probe ...Δmwcv | 79.95 | 59.95 |
| 207 160-10m SWR analyzer | 79.95 | 74.95 |
| 208 2m SWR analyzer | 79.95 | 74.95 |
| 209 1.8-170 MHz SWR analyzer | 109.95 | 99.95 |
| 212 MatchMaker tune up device | 79.95 | |
| 217 SWR analyzer, 30-50 MHz ...Δmwfcv | 79.95 | 49.95 |
| 218 SWR analyzer, 150-170 MHz ...Δmwfcv | 79.95 | 49.95 |
| 219 SWR analyzer, 440 MHz | 99.95 | 89.95 |
| 219N SWR analyzer, 440 MHz w/type N | 99.95 | 89.95 |
| 224 2m FM signal analyzer | 159.95 | 149.95 |
| 249 1.8-170 MHz SWR analyzer/LCD counter | 219.95 | 199.95 |
| 68 249 to 259 upgrade kit | 29.95 | |
| 259 1.8-170 MHz SWR analyzer/RF res meter | 239.95 | 219.95 |
| 29 Padded carrying pouch; 209/249/259 | 19.95 | |
| 29B Pouch with window; 209/249/259 | 24.95 | |
| 66 1.8-30/30-170 MHz dip coils; 249/259 | 19.95 | |
| 280 Mobile compact speaker | 19.95 | |
| 281 ClearTone comunications speaker | 9.95 | |
| 283 Speaker/mic, split jack; Alinco | 19.95 | |
| 284 Speaker/mic; Icom/Yaesu/Alinco | 19.95 | |
| 285 Mini spkr/mic; Icom/Yaesu/Alinco | 19.95 | |
| 285L Mini spkr/mic L for Icom/Yaesu/Alinco | 19.95 | |

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| 286 Speaker mic; Kenwood | 19.95 | |
| 287 Mini spkr/mic; Kenwood | 19.95 | |
| 287L Mini spkr/mic L for Kenwood | 19.95 | |
| 323 Keep-it-up battery maintainer ...Dmwfv | 59.95 | 39.95 |
| 346 600 MHz LCD frequency counter ...Δmwfv | 189.95 | 139.95 |
| 411 Personal Morse Code Tutor | 69.95 | |
| 413 Basic Code Tutor | 39.95 | |
| 417 Code Tutor with QSO | 59.95 | |
| 418 Code Tutor with LCD display | 79.95 | 74.95 |
| 432 Voice Memory Keyer | 109.95 | 99.95 |
| 462B RTTY/ASCII/CW/AMTOR Rcvr multi-reader | 169.95 | 159.95 |
| 5162 Receiver cable for 462B | 4.95 | |
| 550 Hand key | 7.95 | |
| 557 Deluxe code oscillator w/key | 24.95 | |
| 701 Toroid RFI filters ...pack of 4 | 14.95 | |
| 702 200w low-pass filter | 24.95 | |
| 704 1kw low-pass filter | 39.95 | |
| 711 High pass filter | 19.95 | |
| 713 2m HT intermod filter | 59.95 | |
| 714 2m mobile intermod filter | 59.95 | |
| 850 AC line voltage monitor | 19.95 | |
| 912 W9INN remote balun | 39.95 | |
| 916 2m/440 duplexer | 29.95 | |
| 931 Artificial ground unit | 79.95 | 74.95 |
| 1025 Noise canceling antenna | 119.95 | 109.95 |
| 1026 Deluxe noise canceling unit w/antenna | 139.95 | 129.95 |
| 1112 Multiple DC outlet | 29.95 | |
| 1116 Dlx multiple DC outlet | 44.95 | |
| 1118 High current multiple DC outlet | 69.95 | |
| 1213 Interface for JVFAX/HamComm software | 29.95 | |
| 1266 C64 disk code tutor program ...Δmwfv | 19.95 | 12.95 |
| 76 1266/67 interface brd; kyr/keyboard ..Δmfv | 19.95 | 2.95 |
| 1268 IBM PC memory keyer ...Δmwfv | 49.95 | 34.95 |
| 1269 IBM code tutor | 19.95 | |
| 1281 IBM Easy-DX logging program ...Δmwfv | 39.95 | 24.95 |
| 1286 Gray Line DX Advantage prog; IBM | 29.95 | |
| 1292 Video digitizer for IBM ...Δmwf | 199.95 | 139.95 |
| 1610 Novice theory tutor soft; IBM ...Δmwfcv | 29.95 | 19.95 |
| 1611 Tech theory tutor soft; IBM ...Δmwfcv | 29.95 | 19.95 |
| 1612 General theory tutor soft; IBM ..Δmwfcv | 29.95 | 19.95 |
| 1613 Advanced theory tutor soft; IBM ...Δmfc | 29.95 | 19.95 |
| 1614 Extra theory tutor soft; IBM ...Δwf | 29.95 | 24.95 |
| 1615 No-code theory tutor software for IBM | 49.95 | |
| 1621 40-10m 54" portable ant w/tuner | 79.95 | 74.95 |
| 1630 Novice theory tutor soft; Mac ...Δmv | 29.95 | 14.95 |
| 1631 Technician theory tutor soft; Mac .Δmfv | 29.95 | 14.95 |
| 1632 General theory tutor soft; Mac ...Δmv | 29.95 | 14.95 |
| 1633 Advanced theory tutor soft; Mac ...Δmv | 29.95 | 14.95 |
| 1634 Extra theory tutor soft; Mac ...Δmv | 29.95 | 14.95 |
| 1635 No-code theory tutor software for Mac | 49.95 | |
| 1680I Windows soft package; Icom ...Δmwfv | 109.95 | 79.95 |
| 1680K Windows soft package; Ken ...Δwfv | 109.95 | 79.95 |
| 1680Y Windows soft package; Yaesu .Δmwfv | 109.95 | 69.95 |
| 1681 Log Windows software ...Δmwf | 69.95 | 59.95 |
| 1682 Packet Windows software ...Δmwfv | 29.95 | 24.95 |
| 1683I Rig Windows software for Icom | 29.95 | |
| 1683K Rig Windows software for Kenwood | 29.95 | |
| 1683Y Rig Windows software for Yaesu | 29.95 | |
| 5383I Icom Xcvr interface cable | 49.95 | |
| 5383K Kenwood Xcvr interface cable | 49.95 | |
| 5383Y Yaesu interface cable, std 6-pin DIN | 49.95 | |
| 5383YB Yaesu interface cable, mini 6-pin DIN | 49.95 | |
| 1700B Combination ant/xmtr switch | 69.95 | |
| 1701 6-position coax switch | 39.95 | |
| 1702B 2-position coax switch | 21.95 | |
| 1702BN 2-pos 1.1 GHz type N switch | 31.95 | |
| 1704 4-pos 500 MHz switch/lightning protect | 59.95 | |
| 1704N 4-position type N switch | 69.95 | |
| 1710 2m ⅜ wave telescopic antenna | 9.95 | |
| 1712 2m/440 telescopic antenna | 14.95 | |
| 1714 2m ½ wave telescopic antenna | 16.95 | |
| 1716 2m/440 duck for HT | 16.95 | |
| 1717 Gain 2m/440 duck for HT | 19.95 | |
| 1718 2m shorty duck for HT | 12.95 | |
| 1721 2m HT UltraLite mag mt antenna | 14.95 | |
| 1722 2m/440 HT UltraLite mag mt antenna | 18.95 | |
| 1724B 2m/440 magnet mt antenna | 14.95 | |

## MFJ - continued

| | Reg | Sale |
|---|---|---|
| 1728B 2m ⅝ wave mag mt ant/PL259/BNC | 24.95 | |
| 1729 2m/440 magnet mt antenna | 29.95 | |
| 1730 2m pocket roll-up vertical ant | 14.95 | |
| 1734 2m/440 2.6/6.3db glass mt antenna | 39.95 | |
| 1738 2m 2.6db glass mt antenna | 29.95 | |
| 94 Remount kit for 1734/1738 | 7.95 | |
| 1740 2m ¼ wave ground plane ant | 12.95 | |
| 1750 2m ⅝ wave ground plane ant | 19.95 | |
| 1752 220 ⅝ wave ground plane ant | 19.95 | |
| 1754 2m/440 ground plane antenna | 24.95 | |
| 1762 6m beam antenna | 69.95 | |
| 1763 2m 3el portable beam | 39.95 | |
| 1764 2 & 6m dual ⅝ super gain base ant | 44.95 | |
| 1765 Direct feed pwr splitter/harness ..Δmwc | 29.95 | 9.95 |
| 1766 Stacked 2m dual ⅝ base ant ...Δmwfcv | 109.95 | 79.95 |
| 1768 2m/440 beam antenna | 69.95 | |
| 1778 G5RV 160-10m 102' ant (needs tuner) | 29.95 | |
| 1780 14-30 150w 2 'x 2' box loop ant .Δmwv | 229.95 | 169.95 |
| 1782 Super Hi-Q 10-30 loop/basic control Δmwfv | 269.95 | 189.95 |
| 1786 Super Hi-Q 10-30MHz loop/dlx control | 299.95 | 269.95 |
| 1312B 12vdc 300ma adapter; 1782/1786 | 12.95 | |
| 1788 40m Super Hi-Q loop antenna | 359.95 | 329.95 |
| 1792 80-40m vertical antenna | 159.95 | 139.95 |
| 1793 80/40/20m vertical antenna | 179.95 | 159.95 |
| 1796 40/20/15/10/6/2m 10' vertical ant | 199.95 | 179.95 |
| 1798 80/40/30/20/17/15/12/10/6/2m 20' vert | 269.95 | 249.95 |
| 1824BB Cell look alike BNC scanner ant | 19.95 | |
| 1824BM Cell look Motorola plug scan ant Δmw | 19.95 | 14.95 |
| 1828B Magnet mt BNC scanner antenna | 29.95 | |
| 1828M Mag mt Motorola plug scan ant ...Δw | 29.95 | 24.95 |
| 1864 Base scanner ant w/preamp ...Δmwf | 79.95 | 59.95 |
| 5022 MFJ TNC - Alinco/Standard HT cable | 14.95 | |
| 5022X PK-232 - Alinco/Standard HT cable | 14.95 | |
| 5022YV KAM VHF/KPC3 - Ali/Sta HT cable | 14.95 | |
| 5024 MFJ TNC - Ico/Yae/Ali/RS HT cable | 14.95 | |
| 5024B PK/PacComm/compatible - Icom/Yaesu | 14.95 | |
| 5024X PK-232 - Ico/Yae/Ali/RS HT cable | 14.95 | |
| 5024YV KAM VHF/KPC3 - Ico/Yae/Ali/RS HT cbl | 14.95 | |
| 5024Z PK-88 - Ico/Yae/Ali/RS HT cable | 14.95 | |
| 5026 MFJ TNC - Kenwood HT cable | 14.95 | |
| 5026X PK-232 - Kenwood HT cable | 14.95 | |
| 5026YV KAM VHF/KPC3 - Kenwood HT cable | 14.95 | |
| 5026Z PK-88 - Kenwood HT cable ...Δmwfcv | 14.95 | 9.95 |
| 5080 MFJ TNC - Yaesu 8-pin cable | 14.95 | |
| 5080M MFJ TNC - Yaesu 8-pin modular | 14.95 | |
| 5080MX PK-232 - Yaesu 8-pin modular | 14.95 | |
| 5080MYV KAM VHF/KPC3 - Yaesu 8-pin mod | 14.95 | |
| 5080MZ PK-88 - Yae 8-pin modular .Δmwfcv | 14.95 | 9.95 |
| 5080X PK-232 - Yaesu 8-pin cable | 14.95 | |
| 5080YH KAM HF port - Yaesu 8-pin cable | 14.95 | |
| 5080YV KAM VHF/KPC3 - Yaesu 8-pin cable | 14.95 | |
| 5080Z PK-88 - Yaesu 8-pin cable ...Δmwfcv | 14.95 | 9.95 |
| 5082 Open end - 8-pin mic cable | 9.95 | |
| 5084 MFJ TNC - Icom 8-pin cable | 14.95 | |
| 5084M MFJ TNC - Icom 8-pin modular | 14.95 | |
| 5084MX PK-232 - Icom 8-pin modular | 14.95 | |
| 5084MYV KAM VHF/KPC3 - Icom 8-pin mod | 14.95 | |
| 5084MZ PK-88 - Ico 8-pin modular ..Δmwfcv | 14.95 | 9.95 |
| 5084X PK-232 - Icom 8-pin cable | 14.95 | |
| 5084YH KAM HF port - Icom 8-pin cable | 14.95 | |
| 5084YV KAM VHF/KPC3 - Icom 8-pin cable | 14.95 | |
| 5084Z PK-88 - Icom 8-pin cable ...Δmwfcv | 14.95 | 9.95 |
| 5086 MFJ TNC - Kenwood/Alinco 8-pin cable | 14.95 | |
| 5086M MFJ TNC - Kenwood 8-pin modular | 14.95 | |
| 5086MX PK-232 - Kenwood 8-pin modular | 14.95 | |
| 5086MYV KAM VHF/KPC3 - Ken 8-pin mod | 14.95 | |
| 5086MZ PK-88 - Ken 8-pin modular .Δmwfcv | 14.95 | 9.95 |
| 5086X PK-232 - Kenwood/Alinco 8-pin cable | 14.95 | |
| 5086YH KAM HF port - Ken/Ali 8-pin cable | 14.95 | |
| 5086YV KAM VHF/KPC3 - Ken/Ali 8-pin cable | 14.95 | |
| 5086Z PK-88 - Ken/Ali 8-pin cable ...Δmwfcv | 14.95 | 9.95 |
| 5088M MFJ TNC - Radio Shack 8-pin modular | 14.95 | |
| 5088MX PK-232 - Radio Shack 8-pin modular | 14.95 | |
| 5088MYH KAM HF - RS 8-pin modular | 14.95 | |
| 5088MYV KAM VHF - RS 8-pin modular | 14.95 | |
| 5088MZ PK-88 - Radio Shack 8-pin modular | 14.95 | |
| 5205 5-pin DIN open end cable | 4.95 | |
| 5222 Open end - Ali split HT cable ...Δmwfcv | 9.95 | 7.95 |

## MFJ - continued

| | Reg | Sale |
|---|---|---|
| **5224** Open end - Ico/Yae/Ali/RS HT cable | 9.95 | |
| **5226** Open end - Kenwood HT cable | 9.95 | |
| **5268** Open end - modular phone plug cable | 9.95 | |
| **5412** IBM printer cable | 9.95 | |
| **5413** RS-232 6' cable DB-25M-25F | 9.95 | |
| **5414** RS-232 6' cable DB-25M-9F | 9.95 | |
| **5803/10** 3' coax jumper cable | 4.95 | |
| **8100K** Shortwave regenerative Rcvr kit | 59.95 | |
| **8100W** Shortwave regenerative Rcvr wired | 79.95 | 72.95 |
| **8400K** 2m receiver kit | 79.95 | 72.95 |
| **8400W** 2m receiver wired | 99.95 | 89.95 |
| **9606X** 6m FM/data Xcvr w/mic | 159.95 | 149.95 |
| **8621** VHF data radio w/145.01 MHz | 119.95 | 109.95 |
| **8621X1** APRS ready VHF data radio/145.79MHz | 139.95 | 129.95 |
| **8631** 220 MHz data transceiver | 139.95 | 129.95 |
| **4110** Portable AC power supply | 39.95 | |
| **5100** Data radio cable - MFJ/TAPR | 14.95 | |
| **5100X** Data radio cable - PK-232 | 14.95 | |
| **5100YH** Data radio cable - KPC-9612 | 14.95 | |
| **5100YV** Data radio cable - KAM/KPC-3 | 14.95 | |
| **5100Z** Data radio cable - PK-88 .....Δmwfv | 14.95 | 9.95 |
| **9015** 5w 15m CW Xcvr | 189.95 | 169.95 |
| **9017** 5w 17m CW Xcvr | 189.95 | 169.95 |
| **9020** 5w 20m CW Xcvr | 189.95 | 169.95 |
| **9030** 5w 30m CW Xcvr | 189.95 | 169.95 |
| **9040** 5w 40m CW Xcvr | 189.95 | 169.95 |
| **27** Handle for CW station | 4.95 | |
| **412** Plug-in Curtis keyer | 39.95 | |
| **726** Plug-in audio filter | 29.95 | |
| **971** 200w portable ant tuner w/meter | 89.95 | 84.95 |
| **1770** Portable 15m dipole | 34.95 | |
| **1771** Portable 17m dipole | 34.95 | |
| **1772** Portable 20m dipole | 34.95 | |
| **1773** Portable 30m dipole | 34.95 | |
| **1774** Portable 40m dipole | 34.95 | |
| **4112** Portable power pack .....Dmwfcv | 49.95 | 39.95 |
| **4114** Rechargeable power pack | 69.95 | 64.95 |
| **9115B** 9015 Xcvr/971 tuner/4114 ps/1770 ant | 339.80 | 299.95 |
| **9117B** 9017 Xcvr/tuner/ps/ant .....Δmwfv | 339.80 | 259.95 |
| **9120B** 9020 Xcvr/971 tuner/4114 ps/1772 ant | 339.80 | 299.95 |
| **9130B** 9030 Xcvr/971 tuner/4114 ps/1773 ant | 339.80 | 299.95 |
| **9140B** 9040 Xcvr/971 tuner/4114 ps/1774 ant | 339.80 | 299.95 |
| **9406X** 6m SSB Xcvr w/mic | 259.95 | 239.95 |
| **9420X** 12w 20m SSB Xcvr w/mic | 239.95 | 219.95 |
| **9440X** 12w 40m SSB Xcvr w/mic | 239.95 | 219.95 |
| **9475X** 12w 75m SSB Xcvr w/mic | 239.95 | 219.95 |
| **62** Headphone kit | 4.95 | |
| **415** SSB Xcvr CW adaptor | 39.95 | |
| **971** 200w HF portable ant tuner w/meter | 89.95 | 84.95 |
| **4110** Portable AC power supply | 39.95 | |
| **4114** Rechargeable power pack | 69.95 | 64.95 |
| **416** CW adapter for 9406X | 39.95 | |
| **1776** 6m dipole for 9406X | 34.95 | |

## MAGELLAN (MAG)

| | | |
|---|---|---|
| **GPS-2000** GPS receiver | $254.98 | 149.99 |
| **GPS-4000** GPS receiver w/carrying case ....Dv | 349.99 | 239.95 |
| **GPS-4000XL** GPS receiver w/carrying case | 349.99 | 249.99 |
| **00-69007-000** External power module | 49.99 | |
| **Meridian XL** GPS/track plotter/detach ant/case | 396.65 | 299.95 |

## MAHA (MAH)

| | | |
|---|---|---|
| **MH-BP-7** 900ma 13.8v Icom nickel hydride | $ 69.95 | |
| **MH-BP-8** 1200ma 8.4v Icom nickel hydride | 59.95 | |
| **MH-BP-8H** 1800ma 8.4v Icom nickel hydride | 69.95 | |
| **MH-BP-83** 1200ma 7.2v Icom nickel hydride | 49.95 | |
| **MH-BP-132B** 1200ma 12v Ico blk nick hyd/mic | 59.95 | |
| **MH-BP-132G** 1200ma 12v Ico gray nick hyd/mic | 59.95 | |
| **MH-BP-173** 650ma 9.6v Icom nickel hydride | 69.95 | |
| **MH-CNB-152** 900ma 12v Sta nickel hydride | 59.95 | |
| **MH-CNB-153** 1200ma 7.2v Sta nickel hydride | 49.95 | |
| **MH-FNB-12** 900ma 12v Yaesu nickel hydride | 59.95 | |
| **MH-FNB-17** 900ma 7.2v Yaesu nickel hydride | 49.95 | |
| **MH-FNB-27** 900ma 12v Yaesu nickel hydride | 59.95 | |
| **MH-FNB-31** 650ma 4.8v Yaesu nickel hydride | 49.95 | |
| **MH-FNB-38** 650ma 9.6v Yaesu nickel hydride | 59.95 | |
| **MH-FNB-40H** 650ma 7.2v Yae nick hyd/ spg clip | 59.95 | |
| **MH-FNB-41** 900ma 9.6v Yae nick hyd/spg clip | 55.95 | |

## MAHA - continued

| | Reg | Sale |
|---|---|---|
| **MH-FNB-V47** 1800ma 7.2v Yaesu nickel hyd | 69.95 | |
| **V47 Belt Clip** Spring loaded belt clip for Yae | 9.95 | |
| **MH-PB-8** 1200ma 12v Kenwood nickel hydride | 62.95 | |
| **MH-PB-17** 900ma 12v Kenwood nickel hydride | 69.95 | |
| **MH-PB-18** 1200ma 7.2v Ken nick hyd; wall cgr only | 49.95 | |
| **MH-PB-32** 900ma 6v Kenwood nickel hydride | 47.95 | |
| **MH-PB-34** 900ma 9.6v Kenwood nickel hydride | 57.95 | |
| **MH-101-I1** Cgr;Ico 157/160/174/131/2/Mah 132B/G | 69.95 | |
| **MH-101-I3** Cgr;Ico 171/172/173/180/Mah BP173 | 69.95 | |
| **MH-101-Y1** Cgr;Yae 10/11/12/17/25/27/Mah 12/27 | 69.95 | |
| **MH-101-Y2** Cgr;Yae FNB31/38/Mah MHFNB38 | 69.95 | |
| **MH-101-Y3** Cgr; Yae 40/41/42/Mah MHFNB41 | 69.95 | |
| **MH-800S** Spkr/mic w/clip; Ali/Ico/Sta/Yae | 19.95 | |
| **MH-800K** Spkr/mic w/clip for Kenwood | 19.95 | |
| **MH-A101** 5/35w 2m FM amplifier | 69.95 | |
| **MH-A102** 5/35w 2m FM/SSB amp/preamp | 89.95 | |
| **MH-A103** 5/50w 2m FM/SSB amp/preamp | 119.95 | |
| **MH-A104** 5/100w 2m FM/SSB amp/preamp | 229.95 | |
| **MH-A201** 5/45w 2m//5/35w 440 FM amp | 159.95 | |
| **MH-A301** 5/50w 2m HT dock boost amp/pre | 115.95 | |
| **MH-A302** 5/45//5/35w 2m/440 HT dock boost | 165.95 | |
| **MHS-I1** Ico 2G/02/2/32 adapter; A301/302 | 9.95 | |
| **MHS-I2** Ico 2SAT adapter; A301/302 | 9.95 | |
| **MHS-I3** Ico 2GXAT/W21AT adapt; A301/302 | 9.95 | |
| **MHS-I4** Ico W32/31/T7/22 adapt; A301/302 | 11.95 | |
| **MHS-K1** Ken 25/26/75/77 adapt; A301/302 | 9.95 | |
| **MHS-K2** Ken 22/79 adapter; A301/302 | 9.95 | |
| **MHS-S1** Standard/ADI adapter; A301/302 | 9.95 | |
| **MHS-Y1** Yae 23/411E/470 adapt; A301/302 | 9.95 | |
| **MHS-Y2** Yae 26/415/530 adapt; A301/302 | 9.95 | |
| **MHS-Y3** Yae FT11/41/51 adapt; A301/302 | 11.95 | |
| **MHS-Y4** Yae FT10/40/50 adapt; A301/302 | 11.95 | |
| **MH-VOX-K** Deluxe VOX spkr/mic for Kenwood | 69.95 | |
| **MH-VOX-S** Dlx VOX spkr/mic; Ali/Ico/Sta/Yae | 69.95 | |

## MALDOL (MAL)

| | | |
|---|---|---|
| **AH-209S** 2m/440 3" duck | $ 18.99 | |
| **ARD-5B** 2m/440 0/3.8db 19.6" mob ant Δmwf | 59.99 | 44.95 |
| **ARD-6** 2m/440 2.6/4.9db 26.8" mobile ant | 70.99 | |
| **ARD-6B** Black 2m/440 2.6/4.9db 26.8" mob | 70.99 | |
| **ARD-10** 2m/440 3/5.5db 34.8" mobile ant | 70.99 | |
| **ARD-10B** Black 2m/440 3/5.5db 34.8" mob | 70.99 | |
| **ARD-12** 2m/440 4.3/6.8db 48.8" mobile ant | 97.99 | |
| **ARD-12B** Black 2m/440 4.3/6.8db 48.8" mob | 97.99 | |
| **ARD-16** 2m/440 5/7.7db 65.6" mobile ant | 99.99 | |
| **ARD-16B** Black 2m/440 5/7.7db 65.6" mob | 99.99 | |
| **ARS-50** 6m 1/4 wave 61.2" mobile antenna | 74.99 | |
| **ARS-146** 2m 4.1db 56" mobile ant .....Δmwfv | 77.99 | 59.95 |
| **ARS-146B** Black 2m 4.1db 56" mobile ant | 77.99 | |
| **ARS-440** 440 5.5db 38.4" mobile ant .Δmwfv | 67.99 | 49.95 |
| **ARS-440B** Black 5.5db 38.4" mobile ant | 67.99 | |
| **EX-110** 2m/440 3/5.5db 37.8" mob ant ..Δwfv | 64.99 | 49.95 |
| **EX-110B** Black 2m/440 3/5.5db 37.8" mob | 64.99 | |
| **EX-111** 2m/440 3.6/6db 44" mobile antenna | 77.99 | |
| **EX-111B** Black 2m/440 3.6/6db 44" mobile | 77.99 | |
| **FA-50** 2m/440 2.15/3.2db 18.8" mag mt ant | 51.99 | |
| **FR-30** 2m/440 15" flexible telescopic whip | 52.99 | |
| **HS-702S** 2m/440 0/3.2db 17.6" duck | 19.99 | |
| **HS-FOX727** 2m/440 9.5/11.15db 3/5el beam | 119.99 | |
| **MK-30H** Hatch/trunk power mount | 164.99 | |
| **MK-30K** Roofrail/carrier power mount | 164.99 | |
| **RG-4M** 13' coax & connector | 17.99 | |
| **VM-2HP** 2m 43.2" 3db 300w mobile ant | 47.99 | |
| **VM-144HP** 2m 71.6" 4.5db 200w mobile ant | 60.99 | |
| **VM-727CR** 2m/440 41.6" 3.8/6.2db mobile | 67.99 | |
| **VM-727E** 2m/440 58.6" 4.5/7.2db mobile | 76.99 | |
| **VM-727HP** 2m/440 36.4" 3/5.5db 300w mob | 53.99 | |
| **VM-727RE** 2m/440 59.4" 4.5/7.2db mobile | 83.99 | |

## MIDLAND (MID)

| | | |
|---|---|---|
| **23-505** 1.5-150MHz dual meter SWR/power | $ 24.95 | |

## MIRAGE (MIR)

| | | |
|---|---|---|
| **A-1015G** 6m FM/SSB 10/150w amp/preamp | $389.00 | 349.95 |
| **B-23G** 2m FM/SSB 2/30w amp/preamp .....Df | 169.00 | 154.95 |
| **B-34** 2m FM 2/35w amplifier | 69.95 | |
| **B-34G** 2m FM/SSB 3.5/35w amp/preamp | 89.95 | |
| **B-215G** 2m FM/SSB 2/150w amp/preamp | 379.00 | 339.95 |

## MIRAGE - continued

| | Reg | Sale |
|---|---|---|
| **B-310G** 2m FM/SSB 4/100w amp/preamp | 199.00 | 179.95 |
| **B-1016G** 2m FM/SSB 10/160w amp/preamp | 379.00 | 339.95 |
| **B-1030G** 2m FM/SSB 10/300w amp/preamp | 689.00 | 619.95 |
| **B-1060G*** 2m FM/SSB 10/600w 28v amp/pre | 1094.00 | 989.95 |
| **B-2516G** 2m FM/SSB 25/160w amp/preamp | 299.00 | 269.95 |
| **B-2530G** 2m FM/SSB 25/300w amp/preamp | 689.00 | 619.95 |
| **B-2560G*** 2m FM/SSB 25/600w 28v amp/pre | 1094.00 | 989.95 |
| **B-5016G** 2m FM/SSB 50/160w amp/preamp | 299.00 | 269.95 |
| **B-5030G** 2m FM/SSB 50/300w amp/preamp | 669.00 | 599.95 |
| **B-5060G*** 2m FM/SSB 50/600w 28v amp/pre | 1094.00 | 989.95 |

*Requires 28 volts; information on combining power supplies included in operations manual.

| | | |
|---|---|---|
| **BD-35** 2m/440 3/45//4/35w HT amp | 159.95 | 149.95 |
| **C-22** 220 FM/SSB 2/20w amplifier | 129.00 | 119.95 |
| **C-22G** 220 FM/SSB 2/20w amp/preamp | 169.00 | 154.95 |
| **C-211G** 220 FM/SSB 2/110w amp/preamp | 339.00 | 299.95 |
| **C-106G** 220 FM/SSB 10/60w amp/preamp | 239.00 | 214.95 |
| **C-1012G** 220 FM/SSB 10/120w amp/preamp | 339.00 | 299.95 |
| **C-1022G** 220 FM/SSB 10/220w amp/preamp | 655.00 | 589.95 |
| **C-2512G** 220 FM/SSB 25/120w amp/preamp | 315.00 | 289.95 |
| **C-2522G** 220 FM/SSB 25/220w amp/preamp | 655.00 | 589.95 |
| **C-5012G** 220 FM/SSB 50/120w amp/pre Δmwf | 334.00 | 259.95 |
| **C-5022G** 220 FM/SSB 50/220w amp/pre Δmwf | 639.00 | 499.95 |
| **D-15N** 430 FM/SSB/ATV 2/18w type N amp | 189.00 | 169.95 |
| **D-26N** 440 FM/SSB 2/60w type N amplifier | 269.00 | 244.95 |
| **D-1010N** 440 FM/SSB 10/100w type N amp | 395.00 | 354.95 |
| **D-3010N** 440 FM/SSB 30/100w type N amp | 365.00 | 329.95 |
| **D-100-ATVN** 430 ATV 1/52w type N amp | 414.00 | 369.95 |
| **D-1010-ATVN** 430 ATV 10/100w type N amp | 414.00 | 369.95 |
| **RC-1*** Remote control head w/18' cable | 45.95 | |

*Not for B-23/C-22/D-26

**The following Repeater Amplifiers are available on Special Order. Specify SO-239 or type N connectors**

| | | |
|---|---|---|
| **A-1015NR** 6m FM 2/80w type N amplifier | $599.00 | 539.95 |
| **A-1015R** 6m FM 2/80w SO-239 amplifier | 579.00 | 519.95 |
| **B-215NR** 2m FM 1/110w type N amplifier | 579.00 | 524.95 |
| **B-215R** 2m FM 1/110w SO-239 amplifier | 559.00 | 504.95 |
| **B-1016NR** 2m FM 2/120w type N amplifier | 619.00 | 559.95 |
| **B-1016R** 2m FM 2/120w SO-239 amplifier | 599.00 | 539.95 |
| **B-2516NR** 2m FM 12/120w type N amplifier | 569.00 | 519.95 |
| **B-2516R** 2m FM 12/120w SO-239 amplifier | 549.00 | 499.95 |
| **C-211NR** 220 FM .5/80w type N amplifier | 649.00 | 584.95 |
| **C-211R** 220 FM .5/80w SO-239 amplifier | 629.00 | 564.95 |
| **C-1012NR** 220 FM 5/90w type N amplifier | 649.00 | 584.95 |
| **C-1012R** 220 FM 5/90w SO-239 amplifier | 629.00 | 564.95 |
| **C-2512NR** 220 FM 15/90w type N amplifier | 615.00 | 559.95 |
| **C-2512R** 220 FM 15/90w SO-239 amplifier | 595.00 | 539.95 |
| **D-1010NR** 440 FM 4/80w type N amplifier | 654.00 | 589.95 |
| **D-3010NR** 440 FM 12/80w type N amplifier | 625.00 | 564.95 |
| **D-100-ATVN-R** 430 ATV 1/40w type N amp | 654.00 | 589.95 |
| **D-1010-ATVN-R** 430 ATV 4/80w type N amp | 654.00 | 589.95 |

### PREAMPS

| | | |
|---|---|---|
| **KP-1/10M** 10m in shack preamp | $139.00 | 124.95 |
| **KP-1/6M** 6m in shack preamp | 139.00 | 124.95 |
| **KP-1/2M** 2m in shack preamp | 139.00 | 124.95 |
| **KP-1/220** 220 in shack preamp | 139.00 | 124.95 |
| **KP-1/440** 440 in shack preamp | 139.00 | 124.95 |
| **KP-2/10M** 10m mast mount preamp | 195.00 | 174.95 |
| **KP-2/6M** 6m mast mount preamp | 195.00 | 174.95 |
| **KP-2/2M** 2m mast mount preamp | 195.00 | 174.95 |
| **KP-2/220** 220 mast mount preamp | 195.00 | 174.95 |
| **KP-2/440** 440 mast mount preamp | 195.00 | 174.95 |

### WATTMETERS

| | | |
|---|---|---|
| **MP-1** 160-10m 25/200/2kw PEP wattmeter | $235.00 | 219.95 |

**Same Day Shipping • Use your Credit Card!**

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## MIRAGE - continued

| | Reg | Sale |
|---|---|---|
| MP-2 6 & 2m 50/500/1.5kw PEP wattmeter .. | 235.00 | 219.95 |
| MP-3 420-450 5/50/500w PEP wattmeter ..... | 265.00 | 249.95 |
| MP-4 1.2 GHz 1/10/100w PEP wattmeter ..... | 279.00 | 259.95 |

## NCG (NCG)

| | | |
|---|---|---|
| BB-516 Motorcycle intercom set ..... | $ 89.95 | |
| BJP-514 Motorcycle earph/mic; Ali/Ico/Sta/Yae | 69.95 | |
| BJP-514K Motorcycle earphone/mic; Kenwood | 69.95 | |
| EN-921 Spkr/mic earpiece; Ali/Ico/Ken/Yae ... | 44.95 | |
| EN-921K Spkr/mic earpiece; Kenwood ..... | 44.95 | |
| MC-910 Ear/bm mic w/cap-clip/ear hook; not Ken | 49.95 | |
| MC-910K Ear/bm mic w/cap-clip/ear hook; Ken HT | 49.95 | |
| MH-900P Ear/bm mic/PTT; all HT but Ken ..Df | 39.95 | |
| MH-900PK Earpiece/boom mic/PTT; Ken HT ... | 39.95 | |
| MP-28 Boom mic/headset/PTT; all HT but Ken | 39.95 | |
| MP-28K Boom mic/headset/PTT for Ken HT ... | 39.95 | |
| NCG-2050 1.6-60MHz 30/300/3kw meter ..... | 149.95 | 139.95 |
| NCG-3000 118-530MHz 5/20/200w PEP meter | 109.95 | 99.95 |
| Power Pocket 12v 2AH lead acid belt batt/cgr | 66.95 | |

## NAVAL (NAV)

| | | |
|---|---|---|
| HTS-3 5-15vdc amplified speaker ..... | $ 29.95 | |
| MK-303 Earphone/PTT/mic; Icom HT's ..Δmfv | 14.95 | 9.95 |

## NEW WAVE (NEW)

| | |
|---|---|
| Adventurer 12' extended Portaple alum mast m | $109.95 |
| Traveler 19' extended Portaple alum mast .m | 124.95 |
| Rover 26' extended Portaple alum mast .....m | 149.95 |
| Expeditioner 33' extended Portaple alum mast m | 174.95 |
| Explorer 40' extended Portaple alum mast m | 199.95 |
| Big Foot Welded, unpainted park-on mt ..m | 119.95 |

## NORCOMM (NOR)

| | | |
|---|---|---|
| NC-101 Tunable CTCSS encoder ..... | $ 19.95 | |
| NC-104 Programmable CTCSS encoder ..... | 24.95 | |
| NC-106 Prog CTCSS encoder/decoder ..... | 54.95 | |
| NC-401 Sub-miniature DTMF decoder ..... | 59.95 | |
| NC-409 DTMF encoder .....Δmw | 59.95 | 44.95 |

## NYE VIKING (NYE)

### ANTENNA TUNERS AND ACCESSORIES

| | |
|---|---|
| MBV-A 3kw tuner with ant switch & meters .. | $879.95 |
| MBV-B As MBV-A, without meters ..... | 760.95 |
| 020-001 2kw low-pass filter ..... | 56.95 |

### MASTER KEY

| | |
|---|---|
| 330-001 Black enamel base w/cable, plug ... | $ 72.95 |

### HEAVY DUTY SPEED-X KEYS WITH NAVY KNOBS

| | |
|---|---|
| 320-001 No shorting switch ..... | $ 44.95 |
| 320-003 As above, w/shorting switch ..... | 51.95 |
| 322-001 Brass hardware, no switch ..... | 35.95 |
| 322-003 As above, w/shorting switch ..... | 44.95 |

### STANDARD SPEED-X KEYS

| | |
|---|---|
| 310-001 Black, no shorting switch ..... | $ 40.95 |
| 310-003 As above, w/shorting switch ..... | 45.95 |
| 312-001 Brass arm, no shorting switch ..... | 32.95 |
| 312-003 As above, w/shorting switch ..... | 39.95 |

### KEY ACCESSORY

| | |
|---|---|
| 013-001 Navy knob for hand key .....Δmwfv | $ 15.50 |

## Oak Bay Technologies (OAK)

| | | |
|---|---|---|
| AM-101B BNC duck window mount ..... | $ 24.95 | |
| BS-25 Automatic car battery saver module ... | 39.95 | |
| CA-232HH Handheld packet cable ..... | 34.95 | |
| CA-232U Universal packet cable ..... | 34.95 | |
| LP-11P 1.8-30 MHz 1kw low-pass filter ..... | 69.95 | |
| LP-50 1.8-54 MHz 1kw low-pass filter ..... | 69.95 | |
| PS-101 Hvy duty DC pwr strip/fuses ..Δmwfc | 84.95 | 69.95 |
| PS-612M Hvy duty DC pwr strip w/breakers .. | 64.95 | |

**ERV, N9XRT**
Sales– Milwaukee Store

**Convenient AES® Gift Certificates. Check next to the Order Blank, then call:**

**1-800-558-0411**

## Optoelectronics (OPT)

| | Reg | Sale |
|---|---|---|
| 8040 Multifunction 10-digit ctr/timer ...Dmfv | $679.00 | 449.95 |
| Cub 1 MHz - 2.8GHz 9-digit mini-ctr .....Δc | 149.00 | 139.95 |
| R-10 30-2000MHz FM Interceptor .....Dmfc | 299.00 | 279.95 |
| Scout/400/Scout 10-2800 freq rec/ctr ....Δmfv | 449.00 | 399.95 |
| Clipmate Windshield mt; Scout/400 Δmwfcv | 25.00 | 19.95 |
| Spectrum FCC data CDROM/Scout prog ..Δmc | 29.00 | 29.95 |
| SSB-220A SSB/gen purp 3GHz bench ctr Δmwfv | 329.00 | 269.95 |
| Antenna Pack 2 5 tuned ants; 26MHz-1GHz Δf | 99.00 | 89.95 |
| BLP-70 Low pass receiving filter .....Δw | 40.00 | 36.95 |
| CB-232 PC interface cable .....Δmwfcv | 39.00 | 32.95 |
| CC-30 Vinyl case for R-10//Scout/400 .....Δv | 9.95 | |
| Optolog Software; 8040/SSB-220A ...Δmwfcv | 25.00 | 19.95 |
| P-30 1X/10X switch probe; ctr/scope .Δmwfcv | 35.00 | 29.95 |
| TA-100S 100-600MHz tele whip ant Δmwfcv | 12.00 | 9.95 |

## OUTBACKER (OUT)

| | |
|---|---|
| OB-8 300w PEP 6' 75-10m 8-band mobile ant .. | $279.95 |
| OB-8HP 500w PEP 6' 75-10m 8-band mob ant . | 299.95 |
| OB-S8 8-band 300w PEP split ant/storage bag | 299.95 |
| OB-8TRI 3-pc 300w PEP 6' 8-band port ant .. | 329.95 |
| Outrunner 300w PEP 9' 9-band mobile ant ... | 349.95 |
| OB-JR8 150w PEP 4' 75-10m 8-band ant ..Df | 229.95 |
| Stealth Plus 100w PEP 4' 75-10m+6/2m ant | 269.95 |
| Perth 150w PEP 7.5' 75-10m mobile ant ..... | 289.95 |
| Perth Plus 150w PEP 75-10m+6m/2m mob ant | 299.95 |
| OB-M 300w PEP 6' 75/40/20/17/10m/HF marine . | 429.95 |
| Outreach 300w PEP 12' 160-10m mobile ant | 399.95 |
| ALP Outpost Base tripod mtg sys for mob ant | 199.95 |
| OB-360 Tnk mt/spring/coax; Perth/JR8/Perth Plus | 99.95 |
| OB-SB ⅜-24 spring and ½" hole base ..... | 99.95 |
| Diamond K-400-3/8C ⅜-24 trunk mt, 6' coax | 69.95 |
| Diamond C-110 10' ext cable; K-400-3/8C . | 14.95 |

## PACCOMM (PAC)

| | |
|---|---|
| APRS port switch ..... | $ 29.95 |
| BayMod-25 Modem & BayCom software ..... | 69.95 |
| HandiPacket Small TNC for handhelds ..... | 229.95 |
| PC-120-1 Alternate to DRSI PCPA-1 spec order | 99.95 |
| PC-120-2 Alternate to DRSI PCPA-2 spec order | 149.95 |
| PicoPacket standard model TNC, 32K RAM .... | 135.95 |
| PicoPacket standard model TNC, 128K RAM .. | 149.95 |
| PicoPacket battery pack model TNC, 32K RAM | 189.95 |
| Spirit-2 Standard high performance controller | 239.95 |
| Tiny-2 Mk-2 Multi-purpose TNC ..... | 149.95 |
| Tiny-2 Mk-2/GPS TNC w/GPS & mag GPS ant | 629.95 |

## Palomar Engineers (PAL)

| | | |
|---|---|---|
| FER-2 RF ferrite toroid kit ..... | $ 20.95 | |
| LA-1 Loop amplifier; matches loop to Rcvr .... | 99.95 | |
| 5-15 MHz plug-in loop (HF-1) ..... | 99.95 | |
| 1.6-5 MHz plug-in loop (160m, 80m) ..... | 99.95 | |
| .55-1.6 MHz plug-in loop (AM broadcast) .... | 99.95 | |
| 150-550 KHz plug-in loop (LF, 1750m) ..... | 99.95 | |
| 40-150 KHz plug-in loop (WWVB, Loran) ..... | 99.95 | |
| M-840 Bar graph HF auto SWR/power meter .. | 199.95 | 189.95 |
| PS-95 AC adapter for M-835/840 ..... | 15.95 | |
| MDB-2 Mag dipole receiving balun .....Dmfv | 39.95 | 29.95 |
| MLB-1 Magnetic longwire receiving balun ..... | 49.95 | |
| MSB-3 Magnetic switch receive balun Dmwfv | 135.00 | 99.95 |
| P-405 1.8-54MHz 20db 9v Rcv preamp .Dmwv | 149.95 | 69.95 |
| P-408 1.8-54MHz 20db AC Rcvr preamp .....Dfc | 159.95 | 99.95 |
| P-412X 160-6m 20db mobile Xcv preamp Dm | 179.95 | 139.95 |
| P-508 .2-30MHz 12v active Rcvr preamp ..... | 99.95 | |
| PCM-1 1-30MHz RF current meter ..... | 135.00 | 129.95 |
| PF-300 SC audio filter .....Dv | 159.95 | 99.95 |
| PK-200 Jones dual-paddle key .....Dmwfc | 189.95 | 169.95 |
| PK-200B Brass Jones dual-paddle key ..... | 225.00 | 209.95 |
| PK-203 Brass Jones single lever key ..... | 230.00 | 219.95 |
| PT-340 Tuner-Tuner (use with ant tuner) ..... | 99.95 | |
| RFI-3 RF interference kit ..... | 20.95 | |
| RX-100 1-100 MHz RX noise bridge ..... | 89.95 | |
| SMB-5 SmartBridge prog for AT computers | 29.95 | |
| SB-4 2kw 1.7-30 MHz 4:1 balun w/SO-239 ... | 89.95 | |
| VLF-A VLF converter; 10-500 KHz to 80m ..... | 89.95 | |
| VLF-S VLF conv; 10-500 KHz to 4-4.5 MHz ..... | 89.95 | |

## PANASONIC (PAN)

| | | |
|---|---|---|
| RF-B45 Compact FM/LW/MW/SW port Rcvr .... | $199.95 | 169.95 |

## PAR (PAR)

| | |
|---|---|
| OA-50 6m horizontal omni antenna ..... | $ 63.95 |
| OA-144 2m horizontal omni antenna ..... | 54.95 |
| VHFDN152 Dual band notch filter ..... | 62.95 |
| VHFDN152HT Dual band notch filter for HT ... | 68.95 |

## PATCOMM (PAT)

| | | |
|---|---|---|
| PC-16000 HF Xcvr/digital modem/keyboard .. | 1649.00 | 1449.95 |

## PENETROX (PEN)

| | |
|---|---|
| Penetrox A 4 oz tube for antennas ..... | $ 12.95 |

## PERCON (PEC)

| | |
|---|---|
| Spectrum* FCC database CDROM ..... | $ 29.95 |

## PERIPHEX (PER)

| | |
|---|---|
| BP-3 8.4v 350ma battery for Icom ..... | $ 40.95 |
| BP-7S 13.2v 1200ma battery for Icom ..... | 65.95 |
| BP-8 8.4v 1400ma battery for Icom ..Dmwfcv | 60.95 |
| BP-8S 9.6v 1400ma battery for Icom ..... | 65.95 |
| BP-83S 7.2v 800ma battery for Icom ..... | 43.95 |
| BP-84S 7.2v 1400ma battery for Icom ..... | 63.95 |
| BP-85S 12v 800ma battery for Icom ..... | 76.95 |
| BP-114S 12v 800ma battery for Icom ..... | 83.95 |
| BP-132 12v 600ma battery for Icom ..... | 54.95 |
| BP-132A 12v 600ma battery for Icom ..... | 54.95 |
| SAT Internal 7.2v 300ma int batt; IC-2SAT ... | 25.95 |
| BP-3 Insert 8.4v 270ma insert; Icom BP-3 ... | 18.95 |
| CNB-152 12v 600ma battery for Standard .... | 58.95 |
| CNB-153 7.2v 1100ma battery for Standard .. | 54.95 |
| EBP-22S 12v 800ma battery for Alinco ..... | 65.95 |
| EBP-24S 7.2v 1500ma battery for Alinco ..... | 62.95 |
| EBP-34 4.8v 1200ma battery for Alinco ..... | 45.95 |
| EBP-34S 4.8v 1600ma battery for Alinco ..... | 59.95 |
| EBP-35 7.2v 900ma battery for Alinco ..... | 60.95 |
| EBP-36 9.6v 650ma battery for Alinco ..... | 62.95 |
| FNB-11 12v 800ma battery for Yaesu ..... | 65.95 |
| FNB-12 12v 600ma battery for Yaesu ..... | 60.95 |
| FNB-14 7.2v 1100ma battery for Yaesu ..... | 55.95 |
| FNB-14S 7.2v 1400ma battery for Yaesu ..... | 59.95 |
| FNB-26 7.2v 1100ma battery for Yaesu ..... | 60.95 |
| FNB-26S 7.2v 1400ma battery for Yaesu ..... | 65.95 |
| FNB-27 12v 600ma battery for Yaesu ..... | 60.95 |
| FNB-27S 12v 800ma battery for Yaesu ..... | 65.95 |
| FNB-33 4.8v 1400ma battery for Yaesu ..... | 53.95 |
| FNB-35 7.2v 600ma battery for Yaesu ..... | 49.95 |
| FNB-38 9.6v 650ma battery for Yaesu ..... | 66.95 |
| PB-1 12v 1000ma battery for Kenwood ..... | 67.95 |
| PB-7S 7.2v 1400ma battery for Kenwood ..... | 59.95 |
| PB-8S 12v 800ma battery for Kenwood ..... | 59.95 |
| PB-13S 7.2v 1200ma battery for Kenwood .... | 49.95 |
| PB-14S 12v 400ma battery for Kenwood ..... | 60.95 |
| PB-17 12v 800ma battery for Kenwood ..... | 50.95 |
| PB-18 7.2v 1400ma battery for Kenwood ..... | 55.95 |
| PB-25S/26S 8.4v 1400ma battery; Kenwood . | 75.95 |
| PB-33 6v 1200ma battery for Kenwood ..... | 49.95 |
| PB-34 9.6v 600ma battery for Kenwood ..... | 54.95 |
| Santec ST-142 9.6v 600ma battery; ST-142 .. | 24.95 |

## PHILIPS (PHI)

| | |
|---|---|
| U-105 Light duty rotor ..... | $ 69.95 |
| TB-105 Thrust bearing ..... | 18.95 |

## PIPO TOUCH-TONE PADS (PIP)

| | |
|---|---|
| PK-1 12-digit pad .....m | $ 71.95 |
| PK-1K 12-digit pad w/delay relay .....m | 78.95 |
| PK-1M 12-digit pad for surface mtg .....m | 71.95 |
| PK-2 16-digit pad .....m | 76.95 |
| PK-2K 16-digit pad w/delay relay .....m | 83.95 |
| PK-2M 16-digit pad for surface mtg .....m | 76.95 |
| P-7V 12-digit vertical rugged mini pad ...Δm | 58.95 | 49.95 |

## POLYPHASER (PLY)

### LIGHTNING PROTECTION

| | |
|---|---|
| IS-50NX-C2 125-1000 375/125/50w N flange | $ 56.95 |
| IS-50UX-C0 1.5-400 2kw/375/125w flange mt | 56.95 |

## POLYPHASER - continued

| | Reg | Sale |
|---|---|---|
| **IS-50UX-C1** 50-700MHz 375/125w flange mt. | 56.95 | |
| **IS-B50LN-C2** 125-1000 375/125/50w N bulkhead | 59.95 | |
| **IS-B50LU-C0** 1.5-400 2kw/375/125w bulkhead | 59.95 | |
| **IS-B50LU-C1** 50-700MHz 375/125w bulkhead mt | 59.95 | |
| **IS-IE50LU-C0** 1.5-400 dlx 2kw/375/125w bulk | 106.95 | |
| **IS-IE50LU-C1** 50-500 dlx 375/125w bulkhead | 106.95 | |
| **IS-IE50LN-C1** 50-700 dlx 375/125w N bulkhead | 106.95 | |
| **BF Adapter** Bulkhead to flange mt adapter .. | 9.95 | |
| **FB Adapter** Flange to bulkhead mt adapter .. | 11.95 | |
| **IS-PLDO-120-15A** 120v 15A power protector | 172.95 | |
| **IS-PLDO-120-20A** 120v 20A power protector | 215.95 | |
| **IS-RCT** 8-wire rotor control protector | 54.95 | |
| **J-1** 1½" to 1⅓" bronze transition clamp | 8.95 | |
| **J-2** 1½" to 2¼" bronze transition clamp | 11.95 | |
| **IS-SPTL** Single phone line protector | 57.95 | |
| **3" STRAP** 3" copper strap .....linear ft.,Dmw | 2.95 | |
| **6" STRAP** 6" copper strap .....linear ft.,Dm | 3.95 | |
| **CS112-25** 25' 1½" copper strap | 25.95 | |
| **CS112-50** 50' 1½" copper strap | 51.95 | |
| **CS112-75** 75' 1½" copper strap | 75.95 | |
| **CS112-100** 100' 1½" copper strap | 100.95 | |
| **CS3-25** 25' 3" copper strap | 51.95 | |
| **CS3-50** 50' 3" copper strap | 100.95 | |
| **CS3-75** 75' 3" copper strap | 150.95 | |
| **CS3-100** 100' 3" copper strap | 197.95 | |
| **CS6-25** 25' 6" copper strap | 100.95 | |
| **CS6-50** 50' 6" copper strap | 197.95 | |
| **CS6-75** 75' 6" copper strap | 299.95 | |
| **CS6-100** 100' 6" copper strap | 391.95 | |
| **CU-SPGP** Copper single point ground panel .. | 63.95 | |
| **TK-2** 1½" strap to Rohn twr corrosion free clamp | 5.95 | |
| **TK-3** 1½" strap-2¼" to 3¾" mast corr free clamp | 8.95 | |
| **1C-112S** #6-#1 wire to 1½" strap clamp bond | 10.95 | |
| **20C-112S** #2-0 to #4-0 -1½" strap clamp bond Dmv | 10.95 | |
| **58R-112S** 1½" strap to ⅝" gnd rod clamp bond | 12.95 | |
| **MSC-3** Junc; 2+ 1½" or 3" strap clamp bond | 10.95 | |
| **UNI-KIT 2CT** Gnd kit; coax to alum/tin/galv ... | 29.95 | |
| **UNI-KIT 2TC** Gnd kit; galv twr leg to copper .. | 29.95 | |
| **UNI-KIT 2CC** Ground kit; coax to copper | 28.95 | |
| **UNI-KIT 2TT** Ground kit; galv/alum-galv Δmv | 30.95 | 22.95 |
| **CCK** Copper cleaning kit; 4 oz can, brush | 27.95 | |
| **GLEP** Lightning and EMP Protection book | 22.95 | |

## The POUCH (POU)

| | | |
|---|---|---|
| **10R** For FT-10/40/50 | $ 14.95 | |
| **S-1** Short 1 Pouch for HT | 17.95 | |
| **S-2** Short 2 Pouch for HT | 17.95 | |
| **S-3** Short 3 Pouch for HT | 17.95 | |
| **Slim** Slim Pouch for HT | 17.95 | |
| **Chest B/S** Chestpouch ser B w/S pocket | 29.95 | |

## PREMIER (PRE)

| | | |
|---|---|---|
| **A-200** 2m/440 4.5/7.2db 6' base antenna | $ 86.95 | |
| **A-300** 2m/440 6.8/9.3db 11.5' base ant | 129.95 | 119.95 |
| **A-1000** 2m/440 8.5/11.8db 17.5' base ant | 159.95 | 149.95 |
| **AL-800** 2m/440 32" BNC rubber duck ant | 34.95 | |
| **RD-8** 2m/440 6.5" BNC duck | 17.95 | |
| **RD-9** 2m/440/900 6" BNC duck | 18.95 | |
| **RD-78** 2m/440 15" BNC whip | 22.95 | |
| **RD-98** 2m/440 17" BNC whip | 24.95 | |
| **CM-2** Clip mt w/BNC, coax .....Df | 17.95 | 14.95 |
| **AT-2A/Plus** 2m/220 4.1/4.8 NMO mt mob Dmf | 59.95 | 49.95 |
| **AT-4/UHF** 2m/440 3/5.5db 38" UHF mt .....Dm | 47.95 | 29.95 |
| **PNC-2** 2m/440 3/5.5db 28" broadband mob . | 43.95 | |
| **PNC-4** 2m/440 3/5.5db 40" fold-over mobile | 43.95 | |
| **MC-2** Super suction & mag mt; NMO/UHF .. | 37.95 | |
| **TA-1/UHF** UHF-style trunk mt/coax .....Dm | 28.95 | 24.95 |
| **TA-2** Hvy duty rubber coated tnk lip mt; NMO/UHF | 34.95 | |
| **DX-2** 2m/440 450/300w dplxr/UHF .....Dfv | 43.95 | 39.95 |
| **DX-2/Lead** 2m/440 450/300w dplxr/lead .....Dfv | 46.95 | 39.95 |
| **DX-2MN** 2m/440 450/300w dplxr/N ..... Dmfv | 43.95 | 29.95 |
| **DX-2MNL** 2m/440 450/300w dplx/lead/N .... Dmf | 46.95 | 29.95 |
| **MT-1** 2m/440 15/60w SWR/pwr meter ...Dmw | 49.95 | 39.95 |
| **SB-752** 12vdc 6.5A port batt power pack | 59.95 | |
| **SB-791** 5A ps w/cig outlet; not for radio ..Dm | 29.95 | 9.95 |
| **TX-3** 2m/440/900-1.2 800/800/200w tripxr ..Dmfv | 54.95 | 29.95 |
| **SPM-100** Spkr/mic; ADI/Standard/Yaesu .....† | 27.95 | 19.95 |

## PREMIER - continued

| | Reg | Sale |
|---|---|---|
| **SPM-101** Speaker/mic for Kenwood | 29.95 | |
| **SPM-200** Lapel mic/earph; ADI/Sta/Yaesu ..† | 18.95 | 12.95 |
| **SPM-201** Lapel mic/earphone for Kenwood ... | 19.95 | |
| **SPM-300** Spkr/mic/lock/volume; ADI/Sta/Yae ... | 34.95 | |
| **SPM-301** Spkr/mic/PTT lock/volume; Ken | 36.95 | |
| **SPM-400** Ear/mic; ADI/Standard/Yaesu | 25.95 | |
| **SPM-401** Ear/mic for Kenwood | 26.95 | |
| **SPM-500** Throat/mic/earph; ADI/Sta/Yae | 59.95 | |
| **SPM-501** Throat/mic/earphone for Kenwood ... | 61.95 | |

## PRO AM by VALOR (VAL)

### VHF/UHF ANTENNAS ONLY (No Mounts)

| | | |
|---|---|---|
| **MO144-440** 2m/440 antenna | $ 21.90 | 19.95 |
| **PAQA** 136-515 MHz ¼ wave antenna | 8.95 | |
| **PAQ-144** 2m ¼ wave antenna | 8.95 | |
| **PAQ-435** 440 ¼ wave antenna | 8.95 | |
| **PAQ-3820** 2m ¼ wave whip w/⅜-24 thread ... | 8.95 | |
| **PHB-144** 2m ⅝ wave 3 db antenna | 31.80 | 24.95 |
| **PUB-440** 440 5 db antenna .....Δmwf | 39.80 | 16.95 |

### MOUNTS ONLY FOR ABOVE ANTENNAS

| | | |
|---|---|---|
| **PAM** Low profile magnet mount w/coax | $ 28.40 | 24.95 |
| **PAMB** Black low profile mag mount w/coax ... | 28.40 | 24.95 |
| **PAS** ¾" surface mount w/coax | 20.00 | 16.95 |
| **PASMO** ¾" surface mt only (no coax) | 7.95 | |
| **PAS38** ⅜" surface mount w/coax .....Δmwv | 20.00 | 9.95 |
| **PAS38MO** ⅜" surface mt only (no coax) Δmwv | 7.90 | 4.95 |
| **PAT-2** No hole trunk mount w/coax | 27.90 | 22.95 |
| **PAT-2B** Black no hole trunk mount w/coax | 27.90 | 22.95 |
| **PAT-3** Swivel NMO-style trunk mt w/coax | 35.80 | 29.95 |

### OTHER VHF/UHF ANTENNAS & MOUNTS

| | | |
|---|---|---|
| **77BNC** 2m/440 12" 0/2.1db BNC rubber duck | $ 23.90 | 19.95 |
| **144BNC** 2m 12" ¼ wave rubber duck w/BNC . | 11.00 | 9.95 |
| **220BNC** 220 10" ¼ wave rubber duck w/BNC | 11.00 | 9.95 |
| **450BNC** 440 6½" ¼ wv rubber duck w/BNC .... | 11.00 | 9.95 |
| **BNC-SC** Suction cup extension; rubber ducks | 22.60 | 14.95 |
| **WMSL-BNC** Window clip for rubber ducks ... | 42.80 | 29.95 |
| **82BNC** Magnet mt for BNC w/coax | 27.00 | 22.95 |
| **101ADN** HD alum mirror mt w/SO-239 | 10.30 | 9.95 |
| **301** ⅜-24 magnet mt only w/coax | 25.40 | 19.95 |
| **401** Low profile ⅜-24 mag mt only w/coax | 31.70 | 26.95 |
| **DAK** Mt for 2 vert ants or horizontal dipole | 13.95 | |
| **GM-100AD** SS GM ⅜-24 mirror mt w/SO-239 . | 9.95 | |
| **GM-144** 2m 2.5db on glass antenna | 44.95 | 29.95 |
| **GM-270** 2m/440 2.6/6.3db on glass antenna | 59.95 | 39.95 |
| **TGMKD** On glass replacement mtg kit | 8.95 | |
| **MM-3401** Maxi-mag mt ⅜-24 kit (3-5" mags) | 59.90 | 49.95 |
| **SS-100MOT** 3-way NMO mirror mt w/coax | 23.80 | 19.95 |
| **CX-144**/CX-144B 2m ⅝ wave 3db ⅜-24 whip | 17.90 | 14.95 |
| **MM-270B** 2m/440 mini mag mt ant w/BNC .. | 56.60 | 39.95 |
| **PA-255** 8' 2m/440 base antenna .....Dmwv | 134.95 | 69.95 |
| **PAQM** 144-450 MHz ¼ wave BNC mag ant | 28.80 | 24.95 |
| **PM-144-440BN** 2m/440 BNC mag mt ant | 33.90 | 29.95 |
| **TGS** 30-1200MHz on-glass scanner ant | 48.20 | 39.95 |
| **VAA-002** 144-450 MHz ¼ wave mag mt ant ... | 23.80 | 19.95 |
| **VAA-002BN** 144-450 MHz ¼ wv BNC mag ant | 27.80 | 22.95 |
| **120** Sawtooth hump mt for mobile radios | 7.95 | |
| **D-270** 2m/440 100w duplexer | 45.90 | 39.95 |
| **DB-240** 2m/440 base station antenna ..Dwcv | 105.20 | 69.95 |

### MOBILE HF ANTENNAS (No Mounts)

| | | |
|---|---|---|
| **AB-5** 75/40/20/15/10m antenna | $119.60 | 89.95 |
| **PHF-160** 160m 8' ⅜-24 whip | 97.80 | 69.95 |
| **PHF-75** 75m 8' ⅜-24 whip (4' coil, 4' whip) .. | 29.80 | 24.95 |
| **PHF-40** 40m 8' ⅜-24 whip (4' coil, 4' whip) .. | 23.80 | 19.95 |
| **PHF-30** 30m 8' ⅜-24 whip (4' coil, 4' whip) .. | 23.80 | 19.95 |
| **PHF-20** 20m 8' ⅜-24 whip (4' coil, 4' whip) .. | 23.80 | 19.95 |
| **PHF-17** 17m 8' ⅜-24 whip (4' coil, 4' whip) .. | 23.80 | 19.95 |
| **PHF-15** 15m 8' ⅜-24 whip (4' coil, 4' whip) .. | 23.80 | 19.95 |
| **PHF-12** 12m 8' ⅜-24 whip (4' coil, 4' whip) .. | 23.80 | 19.95 |
| **PHF-10** 10m 8' ⅜-24 whip (4' coil, 4' whip) .. | 23.80 | 19.95 |
| **PHF-6** 6m 8' ⅜-24 whip (4' coil, 4' whip) | 23.80 | 19.95 |

## QSL Card Holders (ART)

| | | |
|---|---|---|
| **QSL Card Holders**, pack of 3, 20 cards/holder . | $ 9.95 | |

## RF APPLICATIONS (RFA)

| | | |
|---|---|---|
| **P-1500** 1.8-30 MHz digital power/SWR meter . | $219.95 | |
| **P-1500-P** Power supply for P-1500 | 16.95 | |
| **P-2000A** 1.8-30 MHz dig power/SWR meter ... | 299.95 | |

## RF Applications - continued

| | Reg | Sale |
|---|---|---|
| **P-2000CW** 1.8-30 MHz audible (CW) meter ... | 249.95 | |
| **P-3000** Deluxe 1.8-30MHz digital power/SWR | 299.95 | |
| **P-3000-P** Power supply for P-3000, etc. ... | 12.95 | |
| **Match Alert** VSWR monitor/alarm | 129.95 | |

## RF CONCEPTS (RFC)

| | | |
|---|---|---|
| **144** 2m FM mini-amp 2/30w amplifier | $119.95 | 109.95 |
| **144P** 2m FM mini-amp 2/30w amp/preamp .. | 129.95 | 119.95 |
| **VHF1-60** 2m 1/60w FM HT amplifier .Dmwfcv | 249.95 | 199.95 |
| **2-23** 2m FM/SSB 2/30w amp/pre .....Dmwfcv | 149.95 | 99.95 |
| **MAX-AMP-10** 2m FM/SSB 10/150w amp/preamp | 349.95 | 319.95 |
| **MAX-AMP-45** 2m FM/SSB 45/150w amp/preamp | 319.95 | 289.95 |
| **2/70** 2m/440 FM 3/30//5/20w HT amp | 259.95 | 239.95 |
| **2/70G** 2m/440 FM 3/30//5/20w HT amp/preamp . | 289.95 | 259.95 |
| **3-211** 220 FM/SSB 2/110w amp/pre ....Dmwf | 349.95 | 269.95 |
| **440** 440 FM mini-amp 3/20w amplifier | 139.95 | 129.95 |
| **440P** 440 FM mini-amp 3/20w amp/preamp . | 159.95 | 149.95 |
| **UHF-50** 440 3/50w FM HT type N amp ...Dmfv | 299.95 | 249.95 |
| **4-32** 440 FM 3/20w amp/preamp .....Dmw | 159.95 | 129.95 |
| **4-110** 440 FM 10/100w N amp/preamp | 399.95 | 359.95 |
| **4-310** 440 FM 30/100w N amp/preamp | 369.95 | 339.95 |

## RF LIMITED (RFL)

| | | |
|---|---|---|
| **DF-4000** 4kw PEP low pass filter | $159.95 | 129.95 |
| **DF-7000** 7kw PEP low pass filter | 179.95 | 149.95 |
| **DF-10000** 10kw PEP low pass filter | 199.95 | 179.95 |
| **HL-35NP** 2m .5-5/20-35w amplifier .Δmwfcv | 89.95 | 69.95 |
| **HL-35V** 2m .5-5/20-35w amp/pre ....Δmwfcv | 119.95 | 89.95 |
| **HL-62V** 2m .5-10/6-60w amp/preamp Dmwfv | 199.95 | 119.95 |
| **HL-36U** 440 .5-12/30w amplifier .....Δmwfv | 259.95 | 199.95 |

## RF PARTS (See Diamond)

## RF PRODUCTS (RFP)

| | | |
|---|---|---|
| **199-416** BNC mag mt, 10' coax w/BNC | $ 17.95 | |

## RMS (RMS)

| | | |
|---|---|---|
| **CN-220** 1.8-225MHz 1.5kw PEP meter Δmwfcv | $144.99 | 119.95 |
| **PA-546** 2m 5/45w amplifier .....Δmwfv | 129.99 | 99.95 |
| **W-450** 140-170/430-470 150w meter Δmwfv | 69.99 | 59.95 |

## RACOM (RCO)

| | | |
|---|---|---|
| **700** Automatic morse code identifier .....m | $ 92.95 | |
| **700-PC** Programming kit .....m | 30.95 | |

## Radio Amateur Callbook (RAC)

| | | |
|---|---|---|
| **058913** 1997 North American Callbook | $ 39.95 | |
| **058905** 1997 International Callbook | 39.95 | |
| **077977** 1997 World Radio TV Handbook | 24.95 | |
| **RACD04** Summer 1997 No Am/Int CDROM | 49.95 | |

### RADIO PUBLICATIONS

| | | |
|---|---|---|
| **087034** All About Cubical Quad Antennas | $ 13.95 | |
| **087042** Beam Antenna Handbook | 13.95 | |
| **087050** All About VHF Amateur Radio | 13.95 | |
| **087069** Radio Amateur Antenna Handbook ... | 13.95 | |
| **087077** Simple, Low Cost Wire Antennas | 13.95 | |
| **087093** Interference Handbook | 13.95 | |
| **087107** All About Vertical Antennas | 13.95 | |

## RAMSEY (RAM)

| | | |
|---|---|---|
| **AA-7** Active antenna kit | $ 28.95 | |
| **AF-1** Hi-Q CW audio filter kit | 34.95 | |
| **AR-1** Aircraft receiver kit | 29.95 | |
| **CS-1** Crystal radio set kit | 19.95 | |
| **CW-7** CMOS keyer kit | 24.95 | |
| **DF-1** Foxhound direction finder kit | 59.95 | |
| **DN-1** Nicad conditioner/fast charger kit | 49.95 | |
| **FM-1** 300' FM broadcast transmitter kit | 5.95 | |
| **FM-4** Hi power FM broadcast transmitter kit . | 14.95 | |
| **FR-1** FM broadcast receiver kit | 24.95 | |
| **HR-20** 20m receiver kit | 29.95 | |
| **HR-40** 40m receiver kit | 29.95 | |
| **HR-80** 80m receiver kit | 29.95 | |
| **PR-10** 2m preamp kit | 17.95 | |
| **QRP-20** 20m CW transmitter kit | 29.95 | |
| **QRP-40** 40m CW transmitter kit | 29.95 | |
| **QRP-80** 80m CW transmitter kit | 29.95 | |

## RAMSEY - continued

| | | Reg | Sale |
|---|---|---|---|
| RFS-1 | RF sensed switch kit | 14.95 | |
| SCA-1 | SCA decoder kit | 27.95 | |
| SR-1 | Shortwave receiver kit | 29.95 | |
| TS-1 | CW touch paddle switch kit | 6.95 | |
| UT-5 | Universal timer kit | 8.95 | |
| VS-1 | Voice activated switch kit | 6.95 | |
| WA-10 | BNC telescopic whip antenna | 12.95 | |

## RANGER (RAN)

| | | Reg | Sale |
|---|---|---|---|
| RCI-2950 | 25w FM/SSB 10m Xcvr | $499.00 | 259.95 |
| RCI-2970 | 100w FM/SSB 10m Xcvr | 699.00 | 369.95 |
| RCI-2980 | 25w FM/SSB 10m Xcvr w/ps | 799.00 | 419.95 |
| RCI-2990 | 100w FM/SSB 10m Xcvr w/ps | 895.00 | 629.95 |

## ROHN TOWERS (ROH)

| | | | |
|---|---|---|---|
| HBX-40/BXB-6 | 40' tower, 10 sq ft, 228 lbs *T | $469.90 | 399.95 |
| HBX-48/BXB-7 | 48' tower, 10 sq ft, 303 lbs *T | 628.60 | 499.95 |
| HBX-56/BXB-8 | 56' tower, 10 sq ft, 385 lbs *T | 789.00 | 629.95 |
| HDBX-40/BXB-7 | 40' tower, 18 sq ft, 281 lbs *T | 584.60 | 469.95 |
| HDBX-48/BXB-8 | 48' tower, 18 sq ft, 363 lbs *T | 775.00 | 619.95 |

*Drop-shipped from factory or limited stock in Milwaukee for pick-up

On factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB the Rohn factory, which has various locations, via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these drop-shipped towers. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

Note: Rohn states that "antennas developing a large twisting moment due to wind must not be used on HBX/HDBX-series towers. Antennas should be limited to those having a maximum boom length of 10 ft.

| | | | |
|---|---|---|---|
| SS040D70RTP | 40' 70mph self supporting .*T | 1760.80 | 1199.95 |
| SS050D70RTP | 50' 70mph self supporting .*T | 2135.80 | 1439.95 |
| SS060D70RTP | 60' 70mph self supporting .*T | 3110.80 | 2099.95 |
| SS070D70RTP | 70' 70mph self supporting .*T | 3485.80 | 2269.95 |
| SS080D70RTP | 80' 70mph self supporting .*T | 4635.80 | 3119.95 |
| SS090D70RTP | 90' 70mph self supporting .*T | 5012.70 | 3369.95 |

*SS-series towers drop-shipped from factory only

Other Rohn Towers available on Special Order

## ROSETTA (ROS)

| | | | |
|---|---|---|---|
| WiNRADiO | .5MHz-1.3GHz Rcv card/soft/cell blkd † | $699.95 | 639.95 |

## SGC (SGC)

| | | | |
|---|---|---|---|
| 04-01 | SG-2000 150w 1.8-30 MHz 12v Xcvr .. | 1695.00 | 1429.95 |
| 04-01/54-12 | SG-2000/SG-230 package .....† | 2590.00 | 1599.95 |
| 04-06 | SG-2000 Slim Pack Xcvr (no head) ..... | 1595.00 | 1339.95 |
| 04-11 | Std SG-2000 rem head/bkt/20' cable | 695.00 | 589.95 |
| 04-15 | Remote mobile head/mem ch's only . | 495.00 | 399.95 |
| 04-10 | SG-2000 Xcvr w/PowerTalk head ..... | 1995.00 | 1679.95 |
| 04-23 | SG-2000 Xcvr w/Power Talk head/DSP | 2295.00 | 1899.95 |
| 04-12 | Remote kit w/swivel bkt & cable ..... | 200.00 | 179.95 |
| 04-13 | Remote kit w/5-way mount & cable . | 350.00 | 319.95 |
| 04-14 | Rem kit w/suction cup mt & cable ..... | 495.00 | 449.95 |
| 04-22 | PowerTalk remote head ..... | 1095.00 | 799.95 |
| 51-82 | Fan kit for continuous duty xmit ..... | 300.00 | 269.95 |
| 52-31 | Waterproof military handset ..... | 375.00 | 339.95 |
| 52-32 | Telephone handset ..... | 190.00 | 174.95 |
| 52-34 | RS-232 interface; SG-2000 Xcvr ..... | 195.00 | 179.95 |
| 52-47 | Shock/military mounting tray ..... | 300.00 | 269.95 |
| 52-51 | CA-1 High voltage feed wire ..per ft. | 79¢ | |
| 52-52 | CA-2 RG-58 coax cable .....per ft. | 99¢ | |
| 52-53 | CA-230 Ant coupler cable .....per ft. | 4.95 | |
| 52-54 | CA-2000 Remote head cable .per ft. | 4.95 | |
| 53-04 | PS-30 30A/40A peak unreg ps ..... | 425.00 | 399.95 |
| 53-05 | PS-50 50A/70A peak unreg ps ..... | 469.50 | 429.95 |
| 52-61 | PSC/12-1 12' ps cable, 1 plug ..... | 50.95 | |
| 52-62 | PSC/12-2 12' ps cable, 2 plugs ... | 60.95 | |

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## SGC - continued

| | | Reg | Sale |
|---|---|---|---|
| 52-96 | SG-500 1.8-24MHz 12v 500w PEP amp | 1195.00 | 999.95 |
| 70-07 | PowerClear add-on DSP unit ..... | 395.00 | 359.95 |
| 54-12 | SG-230 150w 1.8-30 MHz 12v Smartuner | 595.00 | 489.95 |
| 54-61 | 25' extension cable ..... | 60.95 | |
| 54-62 | 50' extension cable ..... | 90.95 | |
| 54-63 | SmartLock; tuners made after 9/1/93 | 59.95 | |
| 54-15 | SG-235 500w 1.8-30MHz 12v Smartuner | 1595.00 | 1169.95 |
| 54-16 | SmartPro 1.6-30 MHz 12v auto tuner . | 995.00 | 729.95 |
| 54-17 | SG-231 HF+6m 12v Smartuner ..... | 595.00 | 529.95 |
| 55-04 | SG-103 1.8-30MHz 150w dipole ..... | 249.50 | 229.95 |
| 55-06 | SG-104 2-28 MHz 90' 1kw dipole ..... | 700.00 | 629.95 |
| 55-27 | SG-303 1.8-30 9' mobile whip & mt .. | 495.00 | 449.95 |
| 55-67 | Replacement whip for SG-303 ..... | 225.00 | 199.95 |
| 55-45 | QMS Quick universal mount system ... | 490.00 | 449.95 |
| 55-46 | QMS-1 Quick mt system w/SG230 .Dm | 1085.00 | 799.95 |
| 55-47 | QMS-2 Quick mt sys w/SG-230/303/whip | 1580.00 | 895.95 |
| 55-48 | QMS-3 500w antenna system ..... | 2580.00 | 2169.95 |
| 56-15 | External ARQ/FEC system ..... | 1200.00 | 1069.95 |

## SANGEAN (SAN)

| | | | |
|---|---|---|---|
| ATS-202 | AM/FM/shortwave portable receiver . | $139.00 | 89.95 |
| ATS-303 | AM/FM/shortwave portable receiver . | 119.00 | 79.95 |
| ATS-606A | AM/FM/shortwave portable receiver | 249.00 | 169.95 |
| ATS-818 | AM/FM/shortwave portable receiver . | 299.00 | 179.95 |
| ATS-818CS | AM/FM/SW port Rcvr w/cassette .. | 359.00 | 229.95 |
| ATS-909 | AM/FM/shortwave portable receiver . | 389.00 | 279.95 |
| DT-200V | AM/FM/VHF TV sound dig port Rcvr . | 79.95 | 69.95 |

## SEQUOIA (SEQ)

| | | | |
|---|---|---|---|
| POCKET PC REF | Pocket PC reference book .... | $ 14.95 | |
| POCKET REF | Pocket reference book ..... | 9.95 | |

## SHURE (SHU)

| | | | |
|---|---|---|---|
| 526T Series II | Dynamic amplified desk mic .. | $129.00 | 112.95 |
| R96 | Replacement cartridge ..... | 26.95 | |

## SMILEY ANTENNA (SMI)

| | | | |
|---|---|---|---|
| 270A | 2m/440 gain telescopic whip ..... | $ 19.95 | |
| 270A/SMA | 2m/440 gain tele whip w/SMA ..... | 19.95 | |
| 5/8 SLD-2 | 2m ⅝ Slim Duck rubber ant ..... | 17.95 | |
| 5/8 SLD-220 | 220 ⅝ Slim Duck rubber ant ..... | 17.95 | |
| 5/8 SLD-440 | 440 ⅝ Slim Duck rubber ant ..... | 17.95 | |
| 5/8 SLD-2 Combo | 2m ⅝ duck & stubby ant ... | 24.95 | |
| 5/8 SLD-220 Combo | 220 ⅝ duck & stubby ant . | 24.95 | |
| 5/8 SLD-440 Combo | 440 ⅝ duck & stubby ant . | 24.95 | |
| FLX 1/2 WAV-2M | ½ wv 2m BNC whip/flex coil | 25.95 | |
| RD-2 | 2m rubber duck antenna ..... | 14.95 | |
| RD-220 | 220 rubber duck antenna ..... | 14.95 | |
| RDMD-2 | 2m mini rubber duck antenna ..... | 14.95 | |
| RDMD-220 | 220 mini rubber duck antenna .... | 14.95 | |
| RDMD-440 | 440 mini rubber duck antenna .... | 14.95 | |
| RDS-2 | 2m stubby rubber duck antenna ..... | 14.95 | |
| RDS-220 | 220 stubby rubber duck antenna .... | 14.95 | |
| RDS-440 | 440 stubby rubber duck antenna .... | 14.95 | |
| SD-2 | 2m Slim Duck thin rubber antenna ..... | 14.95 | |
| SD-220 | 220 Slim Duck thin rubber antenna .. | 14.95 | |
| SL-440 | 440 slimline type duck ..... | 12.95 | |
| SS-II | Super Stick 2m ¾ wv telescopic ant ..... | 19.95 | |
| SS-III | Super Stick 220 ¾ wv telescopic ant ... | 19.95 | |
| SS-IV | Super Stick 440 ¾ wv telescopic ant .... | 19.95 | |
| SS-II/Combo | 2m ¾ wv telescopic & stubby ant . | 26.95 | |
| SS-III/Combo | 220 ¾ wv telescopic & stubby ant . | 26.95 | |
| SS-IV/Combo | 440 ¾ wv telescopic & stubby ant . | 26.95 | |
| TAQ-2 | 2m ¼ wave stainless whip ..... | 10.95 | |
| TAQ-220 | 220 ¼ wave stainless whip ..... | 10.95 | |
| TAQ-440 | 440 ¼ wave stainless whip ..... | 10.95 | |
| TS | Thin Stick 2m/220 ¾ wave telescopic whip . | 16.95 | |

## SOLARCON (SOL)

| | | | |
|---|---|---|---|
| A-99 | 10m fiberglass base station antenna ... | $ 74.95 | 59.95 |
| GPK-1 | Ground plane radial kit ..... | 39.95 | |

## SOLDER-IT (SLD)

| | | | |
|---|---|---|---|
| ALP-21D | Alum solder paste, 7.1gm ..Δmwfcv | $ 6.00 | 4.95 |
| SP-7D | Solder paste, 7.1 gm ..... | 6.95 | |

## SONY (SON)

### WebTV

| | | | |
|---|---|---|---|
| INT-W100 | WebTV Internet Terminal ..... | $299.95 | 249.95 |

NO exports Sony WebTV

## SONY - continued

| | | Reg | Sale |
|---|---|---|---|
| RM-KW100 | Wireless infrared keyboard ..... | 99.95 | 79.95 |
| RFU-W100 | RF adaptor ..... | 49.95 | |

### SHORTWAVE

| | | | |
|---|---|---|---|
| ICF-2010 | AM/FM/SW/LW/air port Rcvr w/ps .. | $449.95 | 359.95 |
| ICF-SW10 | AM/FM/SW compact receiver ..... | 64.95 | 49.95 |
| ICF-SW15 | AM/FM/SW port receiver .....Dmv | 89.95 | 49.95 |
| ICF-SW30 | AM/FM/SW portable receiver ..... | 139.95 | 99.95 |
| ICF-SW33 | AM/FM/SW port receiver .....Dwfc | 199.95 | 149.95 |
| ICF-SW40 | AM/FM/SW portable receiver ..... | 169.95 | 139.95 |
| ICF-SW55 | AM/FM/SW portable receiver ..... | 449.95 | 349.95 |
| ICF-SW77 | AM/FM/SW portable receiver ..... | 649.95 | 469.95 |
| ICF-SW100S | AM/FM/SW portable receiver ..... | 479.95 | 349.95 |
| ICF-SW1000T | AM/FM/SW port Rcvr w/cassette | 699.95 | 549.95 |
| ICF-SW7600G | AM/FM/SW portable receiver ... | 239.95 | 189.95 |
| AC-E60HG | 6vdc 400ma AC adapter ..... | 22.99 | |
| AN-1 | LW/MW/SW outdoor active rcv ant ..... | 119.95 | 99.95 |
| AN-3 | Aircraft active receive ant .....Δmwfv | 99.95 | 59.95 |
| AN-102 | LW/MW/SW indoor active rcv ant .... | 89.95 | 79.95 |
| FDT-5BX5 | 5" color AC/DC television .....Dm | | 189.95 |

## SOUTH RIVER (UPS OK) (SOU)

| | | | |
|---|---|---|---|
| HDT-3E-PPK | 3' boxed tripod .....Δm | $ 19.95 | |
| HDT-5E-PPK | 5' boxed tripod .....Δm | 29.95 | |

## STANDARD (STA)

| | | | |
|---|---|---|---|
| C-156A | 2m FM HT w/AA battery holder ..... | $289.00 | 199.95 |
| CAW-151B | 12vdc power supply cable ..... | 18.95 | |
| CAW-152B | Cig cord w/filter ..... | 28.95 | |
| CHP-111 | Headset mic w/PTT switch ..... | 48.95 | |
| CHP-150 | Headset mic w/VOX ..... | 87.95 | |
| CMB-600 | Helmet clip for CHP-150 ..... | 14.95 | |
| CLC-157 | Soft case; CNB-157 ..... | 23.95 | |
| CMB-112 | Mounting bracket ..... | 27.95 | |
| CMC-150 | Mobile charger ..... | 28.95 | |
| CMP-111 | Speaker/mic ..... | 58.95 | |
| CMP-113 | Tie-pin spkr/mic ..... | 48.95 | |
| CMP-115 | Mini speaker/mic ..... | 53.95 | |
| CNB-155 | 4.8v 600ma 2.5w nicad battery ... | 30.95 | |
| CNB-156 | 6v 600ma 2.5w nicad battery ..... | 33.95 | |
| CNB-157 | 9.6v 600ma 5w nicad battery ..... | 42.95 | |
| CNB-158 | 6v 1200ma 2.5w nicad battery .... | 44.95 | |
| CSA-181AB | Desk rapid charger ..... | 82.95 | |
| CTN-115 | CTCSS decoder ..... | 70.95 | |
| CWC-156A | Wall cgr; CNB155/156/157/158 | 9.95 | |
| C-178A | 2m/440 FM HT/batt/cgr/TTP Δmwfcv | 459.00 | 369.95 |
| | FREE CMP-115 from Standard - C-178A thru 6/30/97 | | |
| C-228A | 2m/220 FM HT/batt/cgr/TTP/CTCSS .. | 695.00 | 599.95 |
| | $30 instant coupon - C-228A thru 6/30/97 OR | | |
| | FREE CMP-115 from Standard - C-228A thru 6/30/97 | | |
| C-558A | 2m/440 FM HT/batt/cgr/TTP/CTCSS .. | 665.00 | 549.95 |
| | $30 instant coupon - C-558A thru 6/30/97 OR | | |
| | FREE CMP-115 from Standard - C-558A thru 6/30/97 | | |
| C-568A | 2m/440/1.2 FM HT/batt/cgr/TTP/CTCSS | 699.00 | 599.95 |
| C-628A | 440/1.2 FM HT/batt/cgr/TTP/CTCSS .. | 727.00 | 659.95 |
| CAX-02 | Bottom cover ..... | 12.95 | |
| CAX-03 | Bottom cover ..... | 12.95 | |
| CAW-150 | Mobile power supply cable ..... | 18.95 | |
| CAW-151 | 12vdc power supply cable ..... | 14.95 | |
| CAW-152 | Cig cord w/filter ..... | 30.95 | |
| CBT-151 | Battery case ..... | 22.95 | |
| CBT-171 | 6 cell battery case ..... | 21.95 | |
| CBT-175 | 2 cell battery case .....Δmwfcv | 17.00 | 9.95 |
| CHP-111 | Headset mic w/PTT switch ..... | 48.95 | |
| CHP-150 | Headset mic w/VOX ..... | 87.95 | |
| CMB-600 | Helmet clip for CHP-150 ..... | 14.95 | |
| CLC-151 | Reg case; C-158A/CNB-151 ...Δm | 25.00 | 19.95 |
| CLC-152 | Lrg case; C158A/CNB152/153 Δm | 26.00 | 19.95 |
| CLC-171 | Soft case for CNB-171 ..... | 30.95 | |
| CLC-172 | Soft case for CNB-172/173 ..... | 30.95 | |
| CLC-175 | Soft case for CBT-175 ..... | 30.95 | |
| CLC-520 | Std carrying case; 228A/528A ..... | 26.95 | |
| CLC-521 | Large carrying case; 228A/528A .. | 29.95 | |
| CLC-550 | Standard carrying case; 558A ..... | 29.95 | |
| CLC-551 | Large carrying case; 558A ..... | 31.95 | |
| CLC-550R | Orange carrying case ..... | 35.95 | |
| CLC-560 | Case; CBT-171/CNB-171; C-568A | 27.95 | |
| CLC-561 | Case; CNB-172/173 with C-568A | 27.95 | |
| CLC-562 | Leather case; CBT-171/CNB-171 . | 52.95 | |
| CMB-111 | Mobile bracket ..... | 22.95 | |

## STANDARD - continued

| | Reg | Sale |
|---|---|---|
| CMB-112 Mounting bracket | 27.95 | |
| CMC-150 Mobile charger | 28.95 | |
| CMP-111 Speaker/mic | 58.95 | |
| CMP-113 Tie-pin spkr/mic | 48.95 | |
| CMP-115 Mini speaker/mic | 53.95 | |
| CMP-123 Ear phone spkr/mic | 63.95 | |
| CMU-161 200 channel memory | 48.95 | |
| CNB-151 Extra 7.2v 700ma nicad batt | 82.95 | |
| CNB-152 12v 600ma nicad battery | 99.95 | |
| CNB-153 7.2v 1000ma nicad battery | 99.95 | |
| CNB-171 7.2v 700ma nicad battery | 80.95 | |
| CNB-172 12v 600ma nicad battery | 127.00 | 119.95 |
| CNB-173 7.2v 1100ma nicad battery | 99.00 | 94.95 |
| CSA-181A Desk rapid charger | 128.00 | 119.95 |
| CTN-520 Enc/decode; early 228/528A ...Δw | 96.00 | 39.95 |
| CWC-156A Wall charger; CNB-152/162/172 | 28.95 | |
| C-168A Dlx submini 2m HT/batt/cgr/TT .Δmwv | 469.00 | 299.95 |
| C-468A Dlx sub-mini 440 HT/batt/cgr/TTP Δmw | 480.00 | 299.95 |
| **FREE CMP-115 from Standard - C-468A thru 6/30/97** | | |
| CAX-03 Bottom cover | 12.95 | |
| CBT-160 Battery case | 21.95 | |
| CHP-111 Headset mic w/PTT switch | 48.95 | |
| CHP-150 Headset mic w/VOX | 87.95 | |
| CLC-160 Mini carrying case | 26.95 | |
| CLC-161 Mini carrying case | 27.95 | |
| CLC-162 Mini carrying case | 28.95 | |
| CMP-111 Speaker/mic | 58.95 | |
| CMP-113 Tie-pin spkr/mic | 48.95 | |
| CMP-115 Mini speaker/mic | 53.95 | |
| CMP-123 Ear phone spkr/mic | 63.95 | |
| CMU-161 200 channel memory | 48.95 | |
| CNB-160 Mini 6v 300ma nicad batt Δmwfv | 72.00 | 39.95 |
| CNB-161 Mini 7.2v 700ma nicad battery | 78.95 | |
| CNB-162 Mini 12v 600ma nicad battery | 130.00 | 119.95 |
| CNB-163 Mini 7.2v 1000ma nicad batt | 95.95 | |
| CSA-181A Desk rapid charger | 128.00 | 119.95 |
| C-288A Thin sub-mini 220 HT/batt/cgr/TTP | 449.00 | 369.95 |
| CBT-181 Battery case for 4 AA | 18.95 | |
| CBT-182 Battery case for 5 AA | 28.95 | |
| CHP-111 Headset mic w/PTT switch | 48.95 | |
| CHP-150 Headset mic w/VOX | 87.95 | |
| CLC-181 Carrying case w/CNB-181 | 23.95 | |
| CLC-182 Carrying case w/CNB-182/3/4 | 25.95 | |
| CMA-181 Mobile adapter | 42.95 | |
| CMP-111 Speaker/mic | 58.95 | |
| CMP-113 Tie-pin spkr/mic | 48.95 | |
| CMP-115 Mini speaker/mic | 53.95 | |
| CMP-123 Ear phone spkr/mic | 63.95 | |
| CMU-182 200 ch memory for C-188A/288A | 48.95 | |
| CNB-181 4.8v 700ma nicad battery | 59.95 | |
| CNB-182 9.6v 600ma nicad battery | 115.00 | 104.95 |
| CNB-183 6v 1100ma nicad battery | 97.00 | 92.95 |
| CNB-184 6v 700ma nicad battery | 69.95 | |
| CSA-181A Desk rapid charger | 128.00 | 119.95 |
| C-108A 200mw 2m FM HT | 269.00 | 224.95 |
| **$20 instant coupon - C-108A thru 6/30/97 OR** | | |
| **FREE CMP-115 from Standard - C-108A thru 6/30/97** | | |
| C-508A 280mw 2m/440 FM HT | 345.00 | 284.95 |
| CBH-160 Molded belt clip | 12.95 | |
| CHP-111 Headset mic w/PTT switch | 48.95 | |
| CHP-150 Headset mic w/VOX | 87.95 | |
| CLC-401 Standard soft case; C-108A | 16.95 | |
| CLC-402 Dlx soft case w/belt loop; C-108A | 23.95 | |
| CLC-502 Standard soft case; C-508A | 18.95 | |
| CLC-503 Deluxe soft case; C-108A/508A | 19.95 | |
| CMP-111 Speaker/mic | 58.95 | |
| CMP-113 Tie-pin spkr/mic | 48.95 | |
| CMP-115 Mini speaker/mic | 53.95 | |
| CMP-123 Ear phone spkr/mic | 63.95 | |
| CNB-401 Nicad battery | 22.95 | |
| CSA-401A Desk charger | 48.95 | |
| C-510A 2m/440 FM HT/batt/cgr/TTP | 359.00 | 309.95 |
| C-1208DA 50w 2m FM Xcvr w/TTP | 549.00 | 479.95 |
| CAW-561 6.5' mic extension cable | 36.95 | |
| CAW-562 13' mic extension cable | 48.95 | |
| C-5718DA 50/40w 2m/440 FM Xcvr/packet | 849.00 | 719.95 |
| CAW-570 Split cable for microphone | 63.95 | |
| CAW-571 6.5' mic extension cable | 49.95 | |

## STANDARD - continued

| | Reg | Sale |
|---|---|---|
| CAW-572 13' mic extension cable | 54.95 | |
| CAW-579 Packet cable | 32.95 | |
| CRC-5700 Front panel w/freq display | 239.00 | 219.95 |
| CAW-573 6.5' front panel extension cable | 28.95 | |
| CAW-574 13' front panel extension cable | 39.95 | |
| C-5900DA 45w 6m/50w 2m/35w 440 FM/TTP | 1049.00 | 889.95 |
| CAW-590 Split cable for mic | 55.95 | |
| CAW-591 10' extension cable; LCD display | 40.95 | |
| CAW-592 16' extension cable; mic/speaker | 57.95 | |
| CAW-593 26' extension cable; mic/speaker | 74.95 | |
| CMB-5900 Mounting bracket for display | 27.95 | |
| CMU-161 200 channel memory | 48.95 | |
| CSK-12 External speaker | 47.95 | |
| CCR-708A 50-905MHz spectral disp Rcvr/cell blkd | 749.95 | |

## STARTEK (STR)

| | | |
|---|---|---|
| 1350 1-1300 MHz frequency counter | $139.00 | 129.95 |
| ATH-10 1-1200 MHz freq counter w/ATH Δmc | 179.00 | 159.95 |
| ATH-15 1-1500MHz bar graph freq counter | 235.00 | 189.95 |
| ATH-30 1-2800MHz bar graph ctr w/1-shot | 299.00 | 249.95 |
| ATH-30/HS 2800MHz/1-shot/hi-stability | 424.00 | 349.95 |
| ATH-50 5Hz-2800MHz bar/auto trig/hi speed | 339.00 | 299.95 |
| ATH-50/HS 2800MHzr/trig/hi spd/hi stability | 464.00 | 399.95 |
| APA-9/VPA-9 9vdc auto power adapter | 7.95 | |
| RD-2750 27-50MHz rubber duck antenna | 19.95 | |
| RD-150 150MHz rubber duck antenna | 16.95 | |
| RD-450 450MHz rubber duck antenna | 16.95 | |
| RD-800 800MHz rubber duck antenna | 16.95 | |
| TA-90 Telescopic antenna | 12.95 | |
| TA-90L Right angle telescopic antenna | 16.95 | |
| DC-5 BNC to clip leads cable | 12.95 | |
| M-207-IC Interface cable | 10.95 | |
| CC-90 Carrying case | 12.95 | |
| BP-150 130 - 500 MHz bandpass filter | 49.95 | |
| HP-400 400 - 1500 MHz bandpass filter | 49.95 | |
| HP-800 800 MHz - 2 GHz bandpass filter | 49.95 | |
| LP-60 DC - 60 MHz bandpass filter | 49.95 | |
| DC-10 Direct probe | 22.95 | |
| LP-22 Lo-pass probe | 29.95 | |
| P-60 Probe, 60 MHz scope, 200 MHz FC | 29.95 | |
| P-100 Probe, 100 MHz scope, 300 MHz FC | 39.95 | |
| P-110 Probe, 200MHz cscope, 500 MHz FC | 69.00 | 49.95 |

## TAB Books (TAB)

| | | |
|---|---|---|
| 447748 Shortwave Listener's Q & A Book Dmf | $14.95 | 12.95 |
| 633626 Radio Amateur's Digital Comm Handbook | 14.95 | |
| 640967 Amateur Radio Encyclopedia | 29.95 | |
| 641351 Shortwave Radio Listening for Beginners | 12.95 | |
| 643478 Complete SW Listener's Handbook | 21.95 | |
| 643540 Beginner's Handbook of Amateur Radio | 22.95 | |
| 765340 Build Your Own Shortwave Antennas | 16.95 | |

## TIMEWAVE (TIM)

| | | |
|---|---|---|
| DSP-9 Digital signal processing unit | $169.00 | 159.95 |
| DSP-9 PLUS Advanced dig sig processing unit | 209.00 | 199.95 |
| DSP-59 PLUS Dlx dig signal processing unit | 269.00 | 259.95 |
| DSP-599zx All-mode DSP noise filter | 379.00 | 369.95 |
| DSP-59Y DSP filter module for Yaesu SP-5/6 | 389.00 | 379.95 |
| Upgrade 3.0 DSP-9 to ver 3.0 upgrade kit ..m | 30.95 | |

## TRIPP LITE (TRI)

| | | |
|---|---|---|
| PR-7 5A power supply, 7A surge | $55.00 | 49.95 |
| PR-10 7.5A power supply, 10A surge | 79.00 | 69.95 |
| PR-12 9A power supply, 12A surge | 85.00 | 74.95 |
| PR-20 16A power supply, 20A surge | 125.00 | 99.95 |
| PR-30 24A power supply, 30A surge | 172.00 | 129.95 |
| PR-40 32A power supply, 40A surge | 211.00 | 169.95 |
| PR-50 37A power supply, 50A surge | 262.00 | 199.95 |
| PR-60 48A power supply, 60A surge | 309.00 | 239.95 |
| TL-11 Trim Line small low prof 8A ps, 11A surge | 85.00 | 69.95 |
| TLC-11 Trim Line lg low prof 8A ps, 11A surge | 97.00 | 79.95 |
| BC PERS-280 Standby UPS 280VA, 2 outlets | 129.00 | 99.95 |
| BC PERS-420 Standby UPS 420VA, 2 outlets | 175.00 | 139.95 |
| BC INTERNET-325 Stdby UPS 325VA ...Dmwfv | 165.00 | 119.95 |
| BC INTERNET-450 Stdby UPS 450VA ..Dmwfcv | 199.00 | 129.95 |
| BC INTERNET-675 Stdby UPS 675VA .....Δmwfv | 299.00 | 199.95 |
| IBAR-12 Rack mt 12-out surge suppress Δmwv | 169.00 | 79.95 |
| ISOBAR-4 4 outlet premium surge suppressor | 79.95 | 49.95 |
| ISOBAR-6 6 outlet premium surge suppressor | 99.95 | 59.95 |
| ISOBAR-8 ULTRA 8 outlet surge suppressor/LEDs | 116.95 | 79.95 |

## TRIPP LITE - continued

| | Reg | Sale |
|---|---|---|
| MT-6+ 6 outlet console surge suppressor | 149.95 | 99.95 |
| SUPER-7 7 outlet surge suppressor | 27.95 | |
| SUPER-7+TEL 7 outlet/fax modem surge | 38.50 | |
| TR-6 Surge Alert 6 outlet super suppressor | 59.95 | 49.95 |
| TR-6FM Surge Alert+Tel 6 out super suppressor | 69.95 | 59.95 |

## TUBES (TUB)

| | | |
|---|---|---|
| 6146W Tube | $26.95 | |
| 12BY7A Tube | 12.95 | |
| 3-500G High dissipation tube (3-500Z) | 119.95 | |
| 3-500Z | 199.95 | |
| 572B For Yaesu, etc. | 49.95 | |
| 811A For Collins, etc. | 19.95 | |

**Also see EIMAC**

## TUNE BELT (TUN)

| | | |
|---|---|---|
| HH-1PS Up to 5" HT radio belt | $19.95 | |
| HH-1PM Up to 6" HT radio belt | 19.95 | |
| HH-1PL Up to 7" HT radio belt | 19.95 | |
| HH-2PM Up to 6" HT radio belt w/batt pocket | 21.95 | |
| HH-2PL Up to 8" HT radio belt w/batt pocket | 21.95 | |

## US TOWER (UST)

**FREE STANDING CRANK-UPS (T²X not recommended)**

| | | |
|---|---|---|
| TX-438 38' crank-up tower T | 1269.00 | 1142.95 |
| TX-455 55' crank-up tower †T | 1915.00 | 1399.95 |
| TX-472 72' crank-up tower T | 3147.00 | 2832.95 |
| TX-472MDP 72' crank-up w/motor drive †T | 5064.00 | 3899.95 |
| TX-489 89' crank-up tower T | 5475.00 | 4927.95 |
| TX-489MDPL 89' crank-up w/motor drive T | 8212.00 | 7390.95 |
| TX-3106MDPLSP 106' crank-up/mot drive †T | 12999.00 | 11699.95 |

**FREE STANDING HEAVY DUTY CRANK-UP TOWERS**

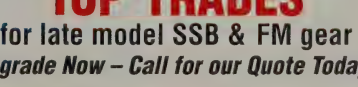
| | | |
|---|---|---|
| HDX-538 38' crank-up tower T | 1642.00 | 1477.95 |
| HDX-555 55' crank-up tower †T | 2874.00 | 2099.95 |
| HDX-572 72' crank-up tower T | 4927.00 | 4434.95 |
| HDX-572MDPL 72' crank-up w/motor drive T | 7528.00 | 6775.95 |
| HDX-589MDPL 89' crank-up w/motor drive T | 9855.00 | 8869.95 |
| HDX-689MDPL 89' HD crank-up w/motor T | 19039.00 | 17135.95 |
| HDX-5106MDPL 106' HD crank-up w/motor T | 20719.00 | 18647.95 |

**COMPACT TMM (Top mount rotor for full retraction)**

| | | |
|---|---|---|
| TMM-433SS 33' crank-up tower T | 1355.00 | 1219.95 |
| TMM-433HD 33' HD crank-up tower T | 1642.00 | 1477.95 |
| TMM-541SS 41' crank-up tower T | 1779.00 | 1599.95 |

**ACCESSORIES FOR CRANK-UP TOWERS**

| | | |
|---|---|---|
| CX-2 Coax arms (2) for 2-section tower | $55.95 | |
| CX-3 Coax arms (3) for 3-section tower | 77.95 | |
| CX-4 Coax arms (4) for 4-section tower | 122.95 | |
| CX-5 Coax arms (5) for 5-section tower | 167.00 | 150.95 |
| CX-6 Coax arms (6) for 6-section tower | 212.00 | 190.95 |
| HDP Service platform T | 904.00 | 813.95 |
| STS-4 Rotor accessory for TX/TMM towers T | 235.00 | 211.95 |
| IV-16 Inverted vee arm for MA's | 41.95 | |
| M-5 2" OD 5' mast extension for MA's | 40.95 | |
| M-10 2" OD 10' mast T | 77.95 | |
| M-15 2" OD 15' mast T | 115.95 | |
| M-20 2" OD 20' mast T | 152.00 | 136.95 |
| M-15R 2" OD 15' reinforced mast T | 174.00 | 156.95 |
| M-20R 2" OD 20' reinforced mast T | 230.00 | 207.95 |
| MD-75 Heavy duty 1 HP motor drive T | 1108.00 | 997.95 |
| MDP-75* Pull-down drive; TX-472/HDX-555 T | 1724.00 | 1551.95 |
| MDPL-75* Pull-down drive; HDX-572 T | 2340.00 | 2106.95 |
| *Requires MCL-100 or RMC-1000 also | | |
| MRF Mast raising fixture | 298.00 | 268.95 |
| MCL-100 Limit switch package | 517.00 | 465.95 |
| RMC-1000 Remote control w/limit switch | 1108.00 | 997.95 |
| RP-3 Rotor plate for 10" section | 39.95 | |
| RP-4 Rotor plate for 12½" section | 47.95 | |
| RP-5 Rotor plate for 15" section | 52.95 | |




# TOP TRADES

**for late model SSB & FM gear**

***Upgrade Now – Call for our Quote Today!***

## US TOWER - continued

| | | Reg | Sale |
|---|---|---|---|
| **TRX-80** | Raising fixture; TX-438/455;HDX-538/555 .T | 483.00 | 434.95 |
| **TRX-80HD** | Raising fixture;TX-472/489;HDX-572/589 ...T | 635.00 | 571.95 |
| **TRX-100HD** | Raising fixture; HDX-689/5106 .T | 895.00 | 805.95 |
| **TB-2US** | Thrust bearing; 2" mast w/2 flange holes | 110.95 | |

### MA-SERIES TUBULAR TOWERS

| | | | |
|---|---|---|---|
| **MA-40** | 40' crank-up mast .....†T | 1007.00 | 679.95 |
| **MA-550** | 55' crank-up mast .....†T | 1704.00 | 1069.95 |
| **MA-550MDP** | 55' crank-up mast w/motor .....T | 3258.00 | 2932.95 |
| **MA-770** | 70' crank-up mast .....T | 2810.00 | 2529.95 |
| **MA-770MDP** | 70' crank up mast w/motor .....T | 4445.00 | 3999.95 |
| **MA-850** | 85' crank-up mast .....T | 4344.00 | 3909.95 |
| **MA-850MDP** | 85' crank-up mast w/motor .....T | 5991.00 | 5391.95 |

### MA-SERIES ACCESSORIES

| | | | |
|---|---|---|---|
| **CX-2M** | Coax arms (2) for MA-40 ..... | $ 59.95 | |
| **CX-3M** | Coax arms (3) for MA-550 ..... | 88.95 | |
| **CX-4M** | Coax arms (4) for MA-770 ..... | 148.00 | 133.95 |
| **CX-5M** | Coax arms (5) for MA-850 ..... | 178.00 | 160.95 |
| **MAB-40** | Hinged base for MA-40 .....T | 402.00 | 361.95 |
| **MAB-550** | Hinged base for MA-550 .....T | 480.00 | 432.95 |
| **MAB-770** | Hinged base for MA-770 .....T | 581.00 | 522.95 |
| **MAB-850** | Hinged base for MA-850 .....T | 704.00 | 633.95 |
| **MAF-40** | Raising fixture for MA-40 ..... | 246.00 | 221.95 |
| **MAF-550** | Raising fixture for MA-550 .....T | 340.00 | 306.95 |
| **MAF-770** | Raising fixture for MA-770 .....T | 346.00 | 311.95 |
| **MAF-850** | Raising fixture for MA-850 .....T | 458.00 | 412.95 |
| **MARB-40** | Rotor base accessory for MA-40 ...T | 615.00 | 553.95 |
| **MARB-550** | Rotor base accessory for MA-550 T | 727.00 | 654.95 |
| **MARB-770** | Rotor base accessory for MA-770 T | 861.00 | 774.95 |
| **MARB-850** | Rotor base accessory for MA-850 T | 1018.00 | 916.95 |

All US TOWER products are drop-shipped (shipped direct to you from the US TOWER factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Visalia, California via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

# UNADILLA (See W2AU)

# Unified Microsystems (UNM)

| | | | |
|---|---|---|---|
| **W9XT** | Contest card for IBM PC & compatible | $149.95 | 139.95 |
| **CCC-4** | 4pin mic contest card cable semi-kit | 44.95 | |
| **CCC-8** | 8pin mic contest card cable semi-kit | 44.95 | |

# Universal Towers (UNT)

| | | | |
|---|---|---|---|
| **4-30** | 4 sq ft wind load 30' alum tower .....T | $348.00 | 313.95 |
| **9-30** | 9 sq ft wind load 30' alum tower .....T | 469.00 | 422.95 |
| **12-30** | 12 sq ft wind load 30' alum tower .....T | 616.00 | 554.95 |
| **21-30** | 21 sq ft wind load 30' alum tower .....T | 732.00 | 658.95 |
| **23-30** | 23 sq ft wind load 30' alum tower .....T | 969.00 | 872.95 |
| **35-30** | 35 sq ft wind load 30' alum tower .....T | 1092.00 | 982.95 |
| **4-40** | 4 sq ft wind load 40' alum tower .....T | 584.00 | 525.95 |
| **7-40** | 7 sq ft wind load 40' alum tower .....T | 734.00 | 660.95 |
| **9-40** | 9 sq ft wind load 40' alum tower .....T | 818.00 | 736.95 |
| **12-40** | 12 sq ft wind load 40' alum tower .....T | 969.00 | 872.95 |
| **15-40** | 15 sq ft wind load 40' alum tower .....T | 1083.00 | 974.95 |
| **21-40** | 21 sq ft wind load 40' alum tower .....T | 1203.00 | 1082.95 |
| **23-40** | 23 sq ft wind load 40' alum tower .....T | 1440.00 | 1296.95 |
| **4-50** | 4 sq ft wind load 50' alum tower .....T | 823.00 | 740.95 |
| **5-50** | 5 sq ft wind load 50' alum tower .....T | 936.00 | 842.95 |
| **7-50** | 7 sq ft wind load 50' alum tower .....T | 1053.00 | 947.95 |
| **9-50** | 9 sq ft wind load 50' alum tower .....T | 1171.00 | 1053.95 |
| **15-50** | 15 sq ft wind load 50' alum tower .....T | 1555.00 | 1399.95 |
| **16-50** | 16 sq ft wind load 50' alum tower .....T | 1678.00 | 1510.95 |
| **4-60** | 4 sq ft wind load 60' alum tower .....T | 1172.00 | 1054.95 |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Sales– Wickliffe, OH Store

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## UNIVERSAL - continued

| | | Reg | Sale |
|---|---|---|---|
| **6-60** | 6 sq ft wind load 60' alum tower .....T | 1437.00 | 1293.95 |
| **7-60** | 7 sq ft wind load 60' alum tower .....T | 1529.00 | 1376.95 |
| **9-60** | 9 sq ft wind load 60' alum tower .....T | 1640.00 | 1476.95 |
| **3-70** | 3 sq ft wind load 70' alum tower .....T | 1527.00 | 1374.95 |
| **4-70** | 4 sq ft wind load 70' alum tower .....T | 1877.00 | 1689.95 |
| **6-70** | 6 sq ft wind load 70' alum tower .....T | 1911.00 | 1719.95 |
| **7-70** | 7 sq ft wind load 70' alum tower .....T | 1996.00 | 1796.95 |
| **3-80** | 3 sq ft wind load 80' alum tower .....T | 2059.00 | 1853.95 |
| **4-80** | 4 sq ft wind load 80' alum tower .....T | 2384.00 | 2145.95 |
| **2-90** | 2 sq ft wind load 90' alum tower .....T | 2470.00 | 2223.95 |
| **B-14** | Base for tower ..... | 65.95 | |
| **B-18** | Base for tower ..... | 65.95 | |
| **B-22** | Base for tower ..... | 110.28 | 99.95 |
| **B-26** | Base for tower ..... | 141.78 | 127.95 |
| **RFM-14** | Flat roof mt for guyed tower ..... | 44.95 | |
| **RFM-18** | Flat roof mt for guyed tower ..... | 69.95 | |
| **RFM-22** | Flat roof mt for guyed tower ..... | 103.95 | 93.95 |
| **RFM-26** | Flat roof mt for guyed tower ..... | 138.66 | 124.95 |
| **R-11** | Rotor mount ..... | 31.95 | |
| **R-14** | Rotor mount ..... | 47.95 | |
| **R-18** | Rotor mount ..... | 63.95 | |

### SEE LITERATURE FOR CONFIGURATION OF TOWERS

| | | | |
|---|---|---|---|
| **11 Top** | 11" top tower section .....T | 118.20 | 106.95 |
| **14 Top** | 14" top tower section .....T | 148.94 | 134.95 |
| **18 Top** | 18" top tower section .....T | 270.10 | 243.95 |
| **14 Taper** | 14" taper tower section .....T | 131.04 | 117.95 |
| **18 Taper** | 18" taper tower section .....T | 235.04 | 211.95 |
| **22 Taper** | 22" taper tower section .....T | 350.48 | 315.95 |
| **26 Taper** | 26" taper tower section .....T | 471.12 | 424.95 |
| **11 Straight** | 11" straight tower section .....T | 116.48 | 104.95 |
| **14 Straight** | 14" straight tower section .....T | 131.04 | 117.95 |
| **18 Straight** | 18" straight tower section .....T | 235.04 | 211.95 |
| **22 Straight** | 22" straight tower section .....T | 350.48 | 315.95 |
| **26 Straight** | 26" straight tower section .....T | 471.12 | 424.95 |
| **HD35-40** | 35 sq ft wind load 40' alum tower T | 1681.00 | 1512.95 |
| **HD21-50** | 21 sq ft wind load 50' alum tower T | 1793.00 | 1613.95 |
| **HD9-60** | 9 sq ft wind load 60' alum tower ....T | 1880.00 | 1692.95 |
| **HD16-60** | 16 sq ft wind load 60' alum tower T | 2265.00 | 2038.95 |
| **HD21-60** | 21 sq ft wind load 60' alum tower T | 2386.00 | 2147.95 |
| **HD8-70** | 8 sq ft wind load 70' alum tower ....T | 2115.00 | 1903.95 |
| **HD12-70** | 12 sq ft wind load 70' alum tower T | 2620.00 | 2358.95 |
| **HD17-70** | 17 sq ft wind load 70' alum tower T | 2858.00 | 2572.95 |
| **HD21-70** | 21 sq ft wind load 70' alum tower T | 2978.00 | 2680.95 |
| **HD8-80** | 8 sq ft wind load 80' alum tower ....T | 2707.00 | 2436.95 |
| **HD9-80** | 9 sq ft wind load 80' alum tower ....T | 2824.00 | 2541.95 |
| **HD11-80** | 11 sq ft wind load 80' alum tower T | 3208.00 | 2887.95 |
| **HD12-80** | 12 sq ft wind load 80' alum tower T | 3213.00 | 2891.95 |
| **HD16-80** | 16 sq ft wind load 80' alum tower T | 3449.00 | 3104.95 |
| **HD4-90** | 4 sq ft wind load 90' alum tower ....T | 2818.00 | 2536.95 |
| **HD8-90** | 8 sq ft wind load 90' alum tower ....T | 3325.00 | 2992.95 |
| **HD11-90** | 11 sq ft wind load 90' alum tower T | 3802.00 | 3421.95 |
| **HD4-100** | 4 sq ft wind load 100' alum tower T | 3775.00 | 3397.95 |
| **HD8-100** | 8 sq ft wind load 100' alum tower T | 4039.00 | 3635.95 |
| **B-30** | Base for HD tower ..... | 221.50 | 199.95 |
| **RFM-30** | Flat roof mt for guyed tower ..... | 193.98 | 174.95 |
| **1-5/8SC** | Flange bearing ..... | 94.95 | |
| **2-3/16SC** | Flange bearing ..... | 120.64 | 108.95 |
| **Top Plate** | Flange plate welded to top section | 23.95 | |

### SEE LITERATURE FOR CONFIGURATION OF TOWERS

| | | | |
|---|---|---|---|
| **30 Taper** | 30" taper tower section .....T | 592.80 | 533.95 |
| **30 Straight** | 30" straight tower section .....T | 592.80 | 533.95 |
| **1-1/4" OD x 10 ft** | aluminum mast .....T | 31.95 | |
| **1-1/2" OD x 10 ft** | aluminum mast .....T | 39.95 | |
| **2" OD x 8 ft** | aluminum mast ..... | 47.95 | |
| **2" OD x 16 ft** | aluminum mast .....T | 94.95 | |

All UNIVERSAL TOWERS products are drop-shipped (shipped direct to you from the UNIVERSAL TOWERS factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Mt. Clemens, Michigan via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

## UNIVERSAL - continued

# VALOR (See PRO AM)

# VANCO (VCO)

| | | | |
|---|---|---|---|
| **SWR-1** | SWR/field strength meter ..... | $ 36.14 | 19.95 |
| **SWR-2** | SWR/power meter ..... | 50.15 | 29.95 |
| **SWR-3** | Mini SWR meter ..... | 21.68 | 14.95 |

# VAN GORDEN (VAN)

| | | | |
|---|---|---|---|
| **Hi-Q 1:1** | balun ..... | $ 14.95 | |
| **Hi-Q 4:1** | balun ..... | 14.95 | |
| **Antenna center** | insulator ..... | 6.95 | |
| **Antenna end** | insulator .....each | 3.95 | |
| **Dog bone** | type antenna insulator .....each | .95 | |
| **NR-100** | Nylon antenna guy rope .....100 ft. | 4.95 | |
| **NR-1,000** | Nylon ant guy rope .....1,000 ft. | 43.95 | 39.95 |
| **D-80** | 80m wire dipole antenna ..... | 31.95 | |
| **SD-80** | Short 80m dipole ..... | 35.95 | |
| **D-40** | 40m wire dipole antenna ..... | 28.95 | |
| **SD-40** | Short 40m dipole ..... | 33.95 | |
| **D-20** | 20m wire dipole antenna ..... | 27.95 | |
| **D-15** | 15m wire dipole antenna ..... | 26.95 | |
| **D-10** | 10m wire dipole antenna ..... | 25.95 | |
| **All Bander** | Dipole 160-10m (w/tuner) 135' ant | 29.95 | |
| **Shorty** | All Bander 160-10m (w/tuner) 70' ant | 44.95 | |
| **G5RV** | Flat-top 5-band 102' ant/xmfr/100' cable | 50.95 | |
| **G5RV-E** | Flat-top 5-band 102' ant/31' cable .. | 28.95 | |
| **G5RV JR** | Flat-top 4-band 52' ant/17' cable ... | 24.95 | |
| **G5RV-M** | Flat-top 5-band 204' ant/65' cable . | 49.95 | |
| **N connector** | Type N connector for 9913 ..... | 4.95 | |
| **450 ohm** | 18ga solid ladderline .....**100** ft. | 12.95 | |
| **450 ohm** | 18ga solid ladderline .....**1,000** ft. | 110.00 | 99.95 |
| **450 ohm 14**ga | solid ladderline .....**100** ft. | 24.95 | |
| **450 ohm 14**ga | solid ladderline .....**1000** ft. | 220.00 | 199.95 |
| (WA1) WA1FFL | **Ladder-Loc** 450 ohm ctr ins | 12.95 | |
| **RG-213** | Non-contaminating .....per ft. | | 49¢ |
| **RG-213/500** | Non-contaminating ..500 ft. Roll | 199.95 | 179.95 |
| **8X-3ST** | 3' RG-8X coax/silver teflon PL259s ... | 8.95 | |
| **8X-6ST** | 6' RG-8X coax/silver teflon PL259s ... | 10.95 | |
| **8X-12ST** | 12' RG-8X coax/silver teflon PL259s | 11.95 | |
| **8X-25ST** | 25' RG-8X coax/silver teflon PL259s | 15.95 | |
| **8X-50ST** | 50' RG-8X coax/silver teflon PL259s | 24.95 | |
| **8X-75ST** | 75' RG-8X coax/silver teflon PL259s | 31.95 | |
| **8X-100ST** | 100' RG-8X coax/silver teflon PL259s | 37.95 | |
| **213-3ST** | 3' RG-213 coax/silver teflon PL259s | 11.95 | |
| **213-6ST** | 6' RG-213 coax/silver teflon PL259s . | 14.95 | |
| **213-12ST** | 12' RG-213 coax/silver teflon PL259s | 18.95 | |
| **213-25ST** | 25' RG-213 coax/silver teflon PL259s | 25.95 | |
| **213-50ST** | 50' RG-213 coax/silver teflon PL259s | 38.95 | |
| **213-75ST** | 75' RG-213 coax/silver teflon PL259s | 54.95 | |
| **213-100ST** | 100' RG-213 coax/silver teflon PL259s | 72.95 | |

# VECTRONICS (VEC)

| | | | |
|---|---|---|---|
| **VC-300M** | 300w mobile antenna tuner ..... | $109.95 | 99.95 |
| **VC-300DLP** | 300w antenna tuner ..... | 159.95 | 149.95 |
| **VC-300D** | 300w digital antenna tuner ..... | 199.95 | 179.95 |
| **HFT-1500** | 1.5kw antenna tuner ..... | 459.95 | 399.95 |
| **AT-100** | .3-30 MHz active antenna/tuner .....m | 79.95 | 74.95 |
| **HF-600QSK** | 1kw HF amplifier w/QSK .....Δm | 1595.00 | 1399.95 |
| **HPF-1** | High pass filter, 75 or 300 ohms ..... | 19.95 | |
| **HPF-2** | Deluxe high pass filter, 75 or 300 ohms | 24.95 | |
| **LP-30** | 1.5kw low pass filter ..... | 49.95 | |
| **LP-2500** | 2.5kw low pass filter ..... | 79.95 | 74.95 |
| **CK-200** | Deluxe keyer .....m | 79.95 | 74.95 |
| **DL-300M** | 300w dummy load ..... | 34.95 | |
| **DL-650M** | 1.5kw dummy load ..... | 64.95 | |
| **DL-2500** | 2.5kw dummy load ..... | 199.95 | 179.95 |
| **PM-30HF** | 300/3kw HF wattmeter ..... | 79.95 | 74.95 |
| **PM-30UV** | 30/300w VHF/UHF wattmeter ..... | 89.95 | 84.95 |
| **AC-12** | 12vdc 300ma adapter ..... | 12.95 | |
| **PS-30F** | 25A power supply, 30A surge ..... | 129.95 | |
| **PS-50F** | 35A power supply, 50A surge ..... | 199.95 | |

# VIBROPLEX (VIB)

| | | | |
|---|---|---|---|
| **090** | Original Gold Bug ..... | $299.95 | 279.95 |
| **100** | Original Presentation Super deluxe bug . | 259.95 | 239.95 |
| **105** | Original Deluxe Bug ..... | 174.95 | |

## VIBROPLEX - continued

| | Reg | Sale |
|---|---|---|
| **110** Original Standard Bug | 139.95 | |
| **113** VibroKeyer Gold Paddle | 279.95 | 259.95 |
| **115** VibroKeyer Deluxe Paddle | 169.95 | |
| **120** VibroKeyer Standard Paddle | 129.95 | |
| **123** Iambic Gold Paddle | 279.95 | 259.95 |
| **125** Iambic Presentation Paddle | 249.95 | 229.95 |
| **130** Iambic Deluxe Paddle | 169.95 | |
| **135** Iambic Standard Paddle | 129.95 | |
| **140** EK-1 Iambic keyer w/paddle | 144.95 | |
| **145** Brass Racer Iambic paddle | 89.95 | |
| **150** Square Brass Racer Iambic paddle | 129.95 | |
| **155** Standard straight key | 139.95 | |
| **160** Deluxe straight key | 174.95 | |

## WA1FFL (WA1)

| | |
|---|---|
| **Ladder-Loc** 450 ohm ladderline center attach | $ 12.95 |

## W2AU (Unadilla) (W2A)

| | |
|---|---|
| **W2AU 1:1** 160-10m balun, lightning arrestor | $ 24.95 |
| **W2AU Beam** Balun, 1:1 | 24.95 |
| **W2AU 4:1** 160-10m balun, lightning arrestor | 24.95 |
| **W2DU-HF** 1:1 1.8-30 MHz choke balun | 26.95 |
| **W2DU Beam** Balun 40-10m 1:1 choke balun | 26.95 |
| **W2DU-VHF** 1:1 30-250 MHz choke balun | 26.95 |
| **HA** AN-sulator center insulator | 9.95 |
| **HE** END-sulator end insulators ....pair | 4.95 |
| **KW-80CW** Reyco 80m CW ant traps ....pair | 48.95 |
| **KW-80F** Reyco 75m phone ant traps ....pair | 48.95 |
| **KW-40** Reyco 40m antenna traps ....pair | 42.95 |
| **KW-30** Reyco 30m antenna traps ....pair | 42.95 |
| **KW-20** Reyco 20m antenna traps ....pair | 41.95 |
| **KW-17** Reyco 17m antenna traps ....pair | 41.95 |
| **KW-15** Reyco 15m antenna traps ....pair | 41.95 |
| **KW-12** Reyco 12m antenna traps ....pair | 41.95 |
| **KW-10** Reyco 10m antenna traps ....pair | 41.95 |
| **W2AU/W2VS** 5-band ant kit (use tuner) | 85.95 |

## W5YI (W5Y)

| | Reg | Sale |
|---|---|---|
| **GWAM** Gordon West Advanced study manual | $ 11.95 | |
| **GWAW** Gordon West Adv written theory tapes | 19.95 | |
| **GWE6** Gordon West 6 ea 10-28 wpm code tapes | 29.95 | |
| **GWEM** Gordon West Extra study manual | 11.95 | |
| **GWET** Gordon West Extra code tapes | 9.95 | |
| **GWEW** Gordon West Extra written theory tapes | 19.95 | |
| **GWG6** Gordon West 6 ea 5-16 wpm code tapes | 29.95 | |
| **GWGM** Gordon West General study manual | 9.95 | |
| **GWGT** Gordon West General code tapes | 9.95 | |
| **GWGW** Gordon West General theory tapes | 9.95 | |
| **GWHC** Gordon West Ham Class instructor video ...Df | 19.95 | 14.95 |
| **GWN6** Gordon West 6 ea 0-7 wpm code tapes | 29.95 | |
| **GWNT** Gordon West Novice Code Teacher | 9.95 | |
| **GWNW** Gordon West Novice theory tapes | 9.95 | |
| **GWT6** Gordon West No-Code Tech theory tapes | 29.95 | |
| **GWTM** Gordon West No-Code Tech manual | 12.95 | |
| **GWTW** Gordon West Tech theory tapes | 9.95 | |
| **HOS** Ham operator software package | 39.95 | |
| **NCS** No-code ham radio software package | 29.95 | |
| **NCVP** Ham No-Code video seminar w/manual | 31.95 | |
| **NCVS** Ham No-Code video licensing ....Dmwcv | 21.95 | |

## WABER AC OUTLET STRIPS (WAB)

| | Reg | Sale |
|---|---|---|
| **4S** 4 outlet/breaker/switch ....Δm | $ 16.60 | 4.95 |
| **5** 5 outlet w/breaker ....Δm | 16.60 | 4.95 |

## WAHL (WAH)

| | Reg | Sale |
|---|---|---|
| **7740** Quick charge cordless soldering iron kit | $ 45.95 | 39.95 |
| **7980** Butane soldering iron and torch .....Dwf | 29.95 | |
| **7985** Butane iron/torch kit pack w/case...Dwf | 54.95 | 49.95 |

## WALNUT CREEK (WAL)

| | Reg | Sale |
|---|---|---|
| **Antennas** Antennas CD-ROM | $ 29.95 | |
| **CICA** 650 MB current Windows share . Δmwc | 29.95 | 9.95 |
| **Garbo** 250 MB DOS + 150 MB Mac ..... Dmwv | 29.95 | 9.95 |
| **Giga Games** 3,000 DOS/Windows games .Δmwc | 39.95 | 14.95 |
| **Ham QRZ** US & Canada calls plus programs.. | 29.95 | |
| **Hobbes** 1,000's of OS/2 applications ..Δmwc | 29.95 | 19.95 |
| **Simtel** 650 MB current DOS programs .Δmwc | 29.95 | 9.95 |

## WELLER (WEL)

| | Reg | Sale |
|---|---|---|
| **7200PK** 75w soldering gun kit | $ 26.95 | |
| **EC-1002-1** 40w temp controlled solder stn | 232.14 | 199.95 |
| **WP-25** 25w professional soldering iron | 31.95 | |
| **W-60P** 60w temp controlled soldering iron | 59.95 | |
| **WTCPT** 60w temp controlled soldering stn | 131.31 | 109.95 |
| **WSTA3** Pyropen portable LP soldering iron | 102.96 | 89.95 |
| **WST2** Pyropen Jr. portable butane iron | 82.67 | 69.95 |

## YAESU (YAE)

| | Reg | Sale |
|---|---|---|
| **FT-1000MP/DC** 9-band Xcvr/EDSP/tuner .....† | 3399.00 | 2749.95 |
| **FP-1025A**/Vertex 20A switching ps, 25A surge | 199.00 | 179.95 |
| **FT-1000MP** 9-band Xcvr/EDSP/tuner/ps .....† | 3699.00 | 2899.95 |
| **DVS-2** Digital voice recording module | 238.00 | 219.95 |
| **FH-1** Remote control keypad | 88.95 | |
| **MD-100A8X** Desk mic w/tone control | 138.00 | 129.95 |
| **MH-31B8** Extra hand microphone | 39.95 | |
| **SP-8** External speaker w/filters | 173.00 | 159.95 |
| **LL-7** Phone patch unit for SP-8 | 153.00 | 139.95 |
| **TCXO-4** TCXO unit | 99.95 | |
| **TCXO-6** Deluxe TCXO unit, 0.5 ppm | 190.00 | 174.95 |
| **YF-110CN** 250 Hz 3rd IF main Rcvr CW filt | 157.00 | 144.95 |
| **YF-110SN** 2 KHz 3rd IF main Rcvr SSB filt | 157.00 | 144.95 |
| **YF-114CN** 250 Hz 2nd IF main Rcvr CW filt | 157.00 | 144.95 |
| **YF-114SN** 2 KHz 2nd IF main Rcvr SSB filt | 157.00 | 144.95 |
| **YF-115C** 500 Hz CW Collins mech filter | 173.00 | 159.95 |
| **YH-77ST** Open-air type stereo headphones | 51.95 | |
| **FT-1000** Xcvr w/ps/tuner/keyer/mic/XF-AB ..† | 4399.00 | 3399.95 |
| **$200 instant coupon - FT-1000 thru 6/30/97** | | |
| **BPF-1** Dual bandpass filter; crossband rcv | 196.00 | 179.95 |
| **TCXO-1** Temp compensated xtal osc Δmwfv | 190.00 | 149.95 |
| **XF-C** 2.4KHz SSB xtal filt (455KHz) Δmwfcv | 157.00 | 129.95 |
| **XF-D** 2 KHz SSB xtal filter (455 KHz) | 157.00 | 139.95 |
| **YF-110C**/XF-E 500 Hz CW xtal filter (455 KHz) | 157.00 | 144.95 |
| **FT-1000D** Dlx Xcvr w/BPF/TCXO/XF-ABCDE .† | 5459.00 | 4299.95 |
| **$200 instant coupon - FT-1000D thru 6/30/97** | | |
| **DVS-2** Digital voice recording module | 238.00 | 219.95 |
| **FIF-232C** Interface for RS-232 | 95.95 | |
| **MD-1C8** Desk microphone .....Dmwfcv | 122.95 | |
| **MD-100A8X*** Desk mic w/tone control | 138.00 | 129.95 |
| *Cable needed for FT-1000D contact service for info | | |
| **SP-5** External spkr w/audio filter | 157.00 | 144.95 |

## YAESU - continued

| | Reg | Sale |
|---|---|---|
| **LL-5** Phone patch unit for SP-5 | 143.00 | 129.95 |
| **XF-455MC** 600Hz CW filter (455KHz); subrcvr | 157.00 | 144.95 |
| **YF-110CN**/XF-F 250 Hz CW xtal filter (455 KHz) | 157.00 | 144.95 |
| **YH-77ST** Open-air type stereo headphones | 51.95 | |
| **FP-25** Power supply for FT-990DC .....Dm | 287.00 | 249.95 |
| **XF-109C** 500 Hz CW filter for FT-990DC Δwcv | 127.00 | 119.95 |
| **FT-920** 9-band Xcvr/AF-DSP/tuner/6m/keyer | 2299.00 | 1899.95 |
| **DVS-2** Digital voice recording module | 238.00 | 219.95 |
| **MD-100A8X** Desk mic w/tone control | 138.00 | 129.95 |
| **SP-8** External speaker w/filters | 173.00 | 159.95 |
| **LL-7** Phone patch unit for SP-8 | 153.00 | 139.95 |
| **YH-77ST** Open-air type stereo headphones | 51.95 | |
| **FT-990** Xcvr/ps/tuner/mic/CW filter ..Dmwfcv | 2759.00 | 1899.95 |
| **$200 instant coupon - FT-990 until gone!** | | |
| **MD-100A8X mic FREE with FT-990! until gone!** | | |
| **DVS-2** Digital voice recording module | 238.00 | 219.95 |
| **FIF-232C** Interface for RS-232 | 95.95 | |
| **MD-1C8** Desk microphone .....Dmwfcv | 122.95 | |
| **MD-100A8X*** Desk mic w/tone control | 138.00 | 129.95 |
| *Cable needed for FT-990 contact service for info | | |
| **SP-6** External speaker w/filter | 157.00 | 144.95 |
| **LL-5** Phone patch unit for SP-6 | 143.00 | 129.95 |
| **TCXO-2** Temp compensated xtal oscillator | 157.00 | 144.95 |
| **XF-10.9M-2D2-01** 2nd IF 2 KHz SSB filter | 127.00 | 119.95 |
| **XF-110CN** 455 KHz 250 Hz CW filter | 157.00 | 144.95 |
| **YH-77ST** Open-air type stereo headphones | 51.95 | |
| **SP-767P** Speaker/patch for FT-767GX .....Δm | 143.00 | 129.95 |
| **FT-900/AT** Xcvr/rem front/mic/tuner ....Dmwv | 1719.00 | 1369.95 |
| **$100 instant coupon - FT-900/AT until gone!** | | |
| **YSK-900 remote kit FREE with FT-900/AT! until gone!** | | |
| **XF-115S-01**/YF115S01 2.75 Collins .....Dmfc | 189.00 | 99.95 |
| **ATU-2** Internal antenna tuner .....Δmwfv | 301.00 | 239.95 |
| **FT-900/CAT** Xcv/rem/mic/tune/Collins SSB filt | 1819.00 | 1369.95 |
| **YSK-900 remote kit FREE with FT-900/CAT! Limited Time!** | | |
| **FP-800** 20A heavy duty power supply ..Dwv | 349.00 | 299.95 |
| **FP-1025A**/Vertex 20A switching ps, 25A surge | 199.00 | 179.95 |
| **CT-26** Mic adapter cable; modular to 8-pin | 22.95 | |
| **DVS-2** Digital voice recording module | 238.00 | 219.95 |
| **FC-800** External long wire auto tuner | 525.00 | 449.95 |
| **FIF-232C** Interface for RS-232 | 95.95 | |
| **MD-1C8** Desk microphone .....Dmwfcv | 122.95 | |
| **MD-100A8X** Desk mic w/tone control | 138.00 | 129.95 |
| **CT-20** Mic cable for use with MD-1C8 | 22.95 | |
| **MH-31A8J** Extra hand microphone | 39.95 | |
| **MMB-20** Mobile mount | 34.95 | |
| **SP-6** External speaker w/filter | 157.00 | 144.95 |
| **LL-5** Phone patch unit for SP-6 | 143.00 | 129.95 |
| **SP-7** Mobile speaker | 40.95 | |
| **TCXO-3** TCXO unit | 79.95 | |
| **XF-110C** 455 KHz 500 Hz CW filter | 157.00 | 144.95 |
| **XF-110CN** 455 KHz 250 Hz CW filter | 157.00 | 144.95 |
| **XF-110S** 455 KHz 2.6 KHz SSB filter | 157.00 | 139.95 |
| **YF-101** 2nd IF 2.6 KHz SSB filter ....Dmwfcv | 179.00 | 139.95 |
| **YA-007FG** Mobile fg 3-30 MHz whip .Dmwfv | 157.00 | 99.95 |
| **YH-77ST** Open-air type stereo headphones | 51.95 | |
| **YSK-900** 20' remote mtg kit w/tnk mtg bkt | 68.95 | |
| **MMB-62** Remote control panel bracket | 39.95 | |
| **FRB-757** External relay box | 31.95 | |


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## YAESU - continued

| | Reg | Sale |
|---|---|---|
| **FT-600** Commercial grade HF Xcvr | 1249.00 | 899.95 |
| **FC-800** External long wire auto tuner | 525.00 | 449.95 |
| **MMB-20** Mobile mount | 34.95 | |
| **FT-840** Xcvr/SW Rcvr | 1099.00 | 899.95 |
| **$100 instant coupon - FT-840 thru 6/30/97** | | |
| **FP-1025A**/Vertex 20A switching ps; 25A surge | 199.00 | 179.95 |
| **FC-10** External coax fed auto tuner | 429.00 | 379.95 |
| **FC-800** External long wire auto tuner | 525.00 | 449.95 |
| **FIF-232C** Interface for RS-232 | 95.95 | |
| **FM-747** FM unit | 62.95 | |
| **MD-1C8** Desk microphone .....Dmwfcv | 122.95 | |
| **MD-100A8X*** Desk mic w/tone control | 138.00 | 129.95 |
| *Cable needed for FT-840 contact service for info | | |
| **MMB-20** Mobile mount | 34.95 | |
| **SP-6** External speaker w/filter | 157.00 | 144.95 |
| **SP-7** Mobile speaker | 40.95 | |
| **TCXO-4** TCXO unit | 99.95 | |
| **YF-112A** 6 KHz AM filter | 127.00 | 119.95 |
| **YF-112C** 500 Hz CW filter | 127.00 | 119.95 |
| **YH-77ST** Open-air type stereo headphones | 51.95 | |
| **FP-700** Power supply .....Dmwfcv | 286.00 | 229.95 |
| **FC-757AT** Auto ant tuner w/memory | 585.00 | 499.95 |
| **FL-7000** Solid state amp w/auto ant tuner | 2617.00 | 2199.95 |
| **CT-11** Cable - FL-7000 to FT-890/900 | 19.95 | |
| **E-767** Cable - FL-7000/FT-767/990/1000/MP | 16.95 | |
| **FAS-1-4R** Remote antenna selector | 143.00 | 129.95 |
| **FRG-100B** .1-30 MHz shortwave receiver | 739.00 | 619.95 |
| **FM Unit-100** FM unit | 47.95 | |
| **TCXO-4** TCXO unit | 99.95 | |
| **YF-110C**/XF-E 500 Hz CW xtal filter | 157.00 | 144.95 |
| **YF-110CN**/XF-F 250 Hz CW xtal filter | 157.00 | 144.95 |
| **XF-455M6** 600 Hz CW filter; FT-650 .....Dmv | 169.00 | 99.95 |
| **YA-30** 1.8-30 MHz broadband dipole ant | 269.00 | 239.95 |
| **YH-77** Lightweight headphones .....Dfc | 30.95 | |
| **YH-77ST** Open-air type stereo headphones | 51.95 | |
| **YS-60** 1.8-60 MHz 2kw PEP wattmeter | 139.00 | 129.95 |
| **YS-500** 140-520 MHz 200w PEP wattmeter | 114.00 | 109.95 |
| **FT-736R** 25w 2m/430 full dplx Xcvr/ps/mic | 2449.00 | 1969.95 |
| **AD-3** 100w 2m/440 duplexer | 52.95 | |
| **E-736** DC cable | 16.95 | |
| **FEX-736-50** 6m module | 317.00 | 279.95 |
| **FEX-736-220** 220 MHz module | 349.00 | 309.95 |
| **FEX-736-1.2** 1.2 GHz module | 619.00 | 539.95 |
| **FIF-232C** Interface for RS-232 | 95.95 | |
| **FTS-8** Encoder/decoder | 62.95 | |
| **FVS-1A** Voice synthesizer | 43.95 | |
| **Keyer-B** Electronic keyer unit | 26.95 | |
| **MD-1C8** Desk microphone .....Dmwfcv | 122.95 | |
| **MH-1B8** Extra hand microphone | 30.95 | |
| **SP-767** Speaker w/audio filters | 110.00 | 99.95 |
| **TV-736** 1.2 GHz ATV converter | 205.00 | 189.95 |
| **FT-690R Mk II** 10w 6m FM/SSB Xcvr/TTP ....† | 889.00 | 569.95 |
| **$70 instant coupon - FT-690R Mk II thru 6/30/97** | | |
| **FT-290R Mk II** 25w 2m FM/SSB Xcvr/TTP | 749.00 | 629.95 |
| **$70 instant coupon - FT-290R Mk II thru 6/30/97** | | |
| **FT-790R Mk II** 25w 430-450 FM/SSB/TTP | 869.00 | 719.95 |
| **$70 instant coupon - FT-790R Mk II thru 6/30/97** | | |
| **CSC-19** Soft case | 16.95 | |
| **FBA-8** Holder for 9 C-cell nicads | 39.95 | |
| **NC-26B** Wall charger for FBA-8 | 9.95 | |
| **FTS-7A** Encoder/decoder; current units | 44.95 | |
| **FT-5100** 50/35w 2m/440 FM/TTP mic ....Dmfc | 799.00 | 499.95 |
| **$100 instant coupon - FT-5100 until gone!** | | |
| **FT-5200** 50/35w 2m/440 FM/TTP mic ..Dmwfv | 839.00 | 599.95 |
| **$50 instant coupon - FT-5200 until gone!** | | |
| **FT-6200** 35/10w 440/1.2GHz FM Xcvr/TTP | 899.00 | 749.95 |
| **DVS-3** Digital voice memory unit | 157.00 | 139.95 |
| **FRC-4** DTMF pager unit; 5200/6200 Dmwfcv | 47.00 | 29.95 |
| **FTS-22** CTCSS decode unit | 68.95 | |

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## YAESU - continued

| | Reg | Sale |
|---|---|---|
| **MH-27B8** Extra TTP mic w/8-pin plug | 65.95 | |
| **MW-2*** Wireless rem control mic ...Dmwfcv | 162.00 | 99.95 |
| * Requires jumper modification | | |
| **MMB-53** Mobile mtg bkt for MW-2 .Δmwv | 8.95 | |
| **SP-7** External speaker | 40.95 | |
| **YSK-1L** Sep kit w/18' cable; FT-5200/6200 | 58.95 | |
| **FT-8000R** 50/35w 2m/440 FM/TTP ....Dmwfcv | 699.00 | 499.95 |
| **ADMS-2C** Windows prog software; 8000R | 39.95 | |
| **FT-8100R** 50/35w 2m/440 FM Xcvr/TTP | 699.00 | 579.95 |
| **FT-8500** 50/35w 2m/440 FM/FS-10 dlx TT mic | 859.00 | 649.95 |
| **FT-8500/MH-39** 50/35w 2m/440 FM/std TTP | 809.00 | 599.95 |
| **ADMS-2C** Windows prog software; 8500 | 39.95 | |
| **CT-39** Packet cable | 9.95 | |
| **FTS-22** CTCSS decode unit | 68.95 | |
| **MH-27B8** TTP mic w/8-pin plug | 65.95 | |
| **MEK-2** Mic adapter kit for MH-27B8 | 42.95 | |
| **MH-39A6J** Extra regular mic for FT-8500 | 104.95 | |
| **MMB-60** Quick release mobile bracket | 31.95 | |
| **SP-7** External speaker | 40.95 | |
| **YSK-8500** Remote separation kit | 69.95 | |
| **MMB-62** Remote control panel bracket | 39.95 | |
| **MH-15D8** Autodial TTP microphone | 75.95 | |
| **FT-7400H** 35w 440 FM Xcvr w/TTP mic | 629.00 | 499.95 |
| **$30 instant coupon - FT-7400H thru 6/30/97** | | |
| **2400 Mic Cable** 2' packet cable | 9.95 | |
| **FRC-6** DTMF pager unit .....† | 47.00 | 19.95 |
| **FTS-17A** CTCSS decode unit | 47.95 | |
| **MH-27A8J** Extra TTP mic w/modular plug | 60.95 | |
| **SP-7** External speaker | 40.95 | |
| **FT-3000M** 70w 2m FM Xcvr/TTP/ext rcv | 599.00 | 449.95 |
| **ADMS-2C** Windows prog software; 3000M | 39.95 | |
| **CT-39** Packet cable | 9.95 | |
| **DVS-4** Digital voice recording module | 47.95 | |
| **FTS-17A** CTCSS decode unit | 47.95 | |
| **FT-2500M** 50w 2m FM Xcvr w/TTP mic .....† | 459.00 | 329.95 |
| **$30 instant coupon - FT-2500M thru 6/30/97** | | |
| **2400 Mic Cable** 2' packet cable | 9.95 | |
| **FRC-6** DTMF pager unit .....▲.....† | 47.00 | 19.95 |
| **FTS-17A** CTCSS decode unit | 47.95 | |
| **FT-7200** 35w 440 FM Xcvr/TTP mic ...Dmwfcv | 639.00 | 249.95 |
| **DVS-3** Digital voice memory unit | 157.00 | 139.95 |
| **FTS-27** CTCSS decode unit | 47.95 | |
| **MW-2** Wireless remote control mic Dmwfcv | 162.00 | 99.95 |
| **MMB-53** Mobile mtg bkt for MW-2 .Δmwv | 8.95 | |
| **SP-7** External speaker | 40.95 | |
| **FP-712**/Vertex 10A switching ps, 12A surge | 135.00 | 129.95 |
| **FP-1025A**/Vertex 20A switching ps, 25A surge | 199.00 | 179.95 |
| **LF-1** Mobile 13A DC noise filter | 26.95 | |
| **MLS-100** Mobile speaker | 45.95 | |
| **SP-3** Small mobile speaker | 23.95 | |
| **SP-4** Mobile speaker | 31.95 | |
| **VXR-5000VADC**/Vertex 25w 2m FM repeater | 1635.00 | 1199.95 |
| **VXR-5000UCDC**/Vertex 25w 440 FM repeater | 1635.00 | 1199.95 |
| Repeaters require service dept. set-up; $72 minimum | | |
| **COM ID-8** Auto morse code ID'er | 69.95 | |
| **MR-KIT1** 19" rack mtg kit; VXR repeater | 218.00 | 199.95 |
| **VXD-40UB** 430-455 duplexer (untuned) | 222.00 | 199.95 |
| Tuning charge; VXD-40UB (specify freqs) | 50.95 | |
| **VX VPL-1** PC programming cable | 55.95 | |

### Accessories for FT-208R/708R

| | | |
|---|---|---|
| **FNB-2A** Nicad battery pack | $ 45.95 | |

### Accessories for 09-series/03-series

| | | |
|---|---|---|
| **FNB-4A** 500ma 12v battery | $ 62.95 | |
| **FTS-6** Encoder/decoder; 09-series .....Dm | 35.00 | 19.95 |
| **MMB-21** Mobile bracket; also for 727R ....Dm | 16.00 | 6.95 |

### Accessories for FT-26/415/416/530

| | | |
|---|---|---|
| **CA-8** 2 charging sleeves; NC-50/416/530 | $ 27.95 | |
| **CLIP-3** Belt clip | 7.95 | |
| **CSC-50** Vinyl case; 415/416/FNB25 .....Dm | 16.00 | 2.95 |
| **CSC-52** Case; 415/416/FNB26/27 .....Δwf | 19.00 | 9.95 |
| **CSC-53** Vinyl case; 26/76/FNB-25 .....Δmwfv | 19.00 | 6.95 |
| **CSC-55** Case: 26/76 w/FNB-26/27 .....Δmwfv | 19.00 | 6.95 |
| **CSC-56** Vinyl case; 530 w/FNB-25 .....Δmwv | 19.95 | |
| **CSC-58** Vinyl case; 530 w/FNB-26/27 ...Δmfv | 19.95 | |
| **FBA-12** AA cell holder | 19.95 | |
| **FNB-25** 600ma 7.2v nicad battery | 39.95 | |

## YAESU - continued

| | Reg | Sale |
|---|---|---|
| **FNB-25G** 600ma 7.2v nicad battery .....Dm | 39.00 | 19.95 |
| **FNB-26** 1000ma 7.2v nicad battery | 55.95 | |
| **FNB-27** 600ma 12v nicad battery (5w) | 62.95 | |
| **FNB-27G** 600ma 12v nicad battery (5w)...Dm | 62.00 | 29.95 |
| **FTS-17A** CTCSS encode/decode unit | 47.95 | |
| **MMB-54** Mobile mounting bracket .....Dmw | 23.00 | 9.95 |
| **NC-18B** Wall charger for FNB-27 | 14.95 | |
| **NC-28B** Wall charger for FNB-25/26 | 14.95 | |
| **YH-2** Lightweight VOX headset w/mic | 30.95 | |
| **FT-23R-17** 2.5w 2m FM HT/FNB-17/cgr | 277.00 | 199.95 |
| **FT-23R-12** 5w 2m FM HT/FNB-12S/cgr | 295.00 | 219.95 |
| **FT-33R** 5w 220 FM HT/batt/cgr | 369.00 | 299.95 |
| **FT-411E** 2.5w 2m FM HT/FNB-17/cgr/TTP | 368.00 | 259.95 |
| **FT-911** 1w 1.2 GHz FM HT/batt/cgr/TTP | 569.00 | 469.95 |

### Accs for FT-23R/33R/73R/411E/811/470/911

| | | |
|---|---|---|
| **CA-7** 2 charging sleeves; NC-50/411E/470 | $ 27.95 | |
| **CLIP-1** Belt clip | 7.95 | |
| **CSC-28** Soft case; 23R/33R/73R w/FNB-12S | 16.95 | |
| **CSC-35** Soft case; FT-411E w/FNB-17 Dmwfv | 16.00 | 9.95 |
| **CSC-37** Soft case; FT-411E w/FNB-12S/14 | 16.95 | |
| **CSC-43** Soft case; FT-470/FNB-9/17 .....Δc | 16.00 | 14.95 |
| **CSC-48** Soft case; 23R/33R/73R w/FNB-17 | 16.95 | |
| **FBA-17** AA battery holder | 19.95 | |
| **FNB-12S** 600ma 12v (5w) battery | 55.95 | |
| **FNB-14** 1000ma 7.2v battery | 55.95 | |
| **FNB-17** 600ma 7.2v battery | 34.95 | |
| **FTS-12** Encoder/decoder for FT-23R/33R/73R | 60.95 | |
| **FTS-17A** Tone squelch/pager; FT-411E | 47.95 | |
| **FTT-4** DTMF (TTP) unit for FT-23/33R | 48.95 | |
| **LCC-25** Leather case for FT-411E .....Δv | 51.95 | |
| **MH-19A2B** Earpiece/microphone .....Dv | 30.95 | |
| **MH-30C2B** Speaker/microphone | 45.95 | |
| **MH-32A2B** Compact lapel speaker/mic | 30.95 | |
| **MH-35A2B** Spkr mic/clip/earphone jack | 39.95 | |
| **MMB-46** Mobile hanger for FT-470 .....Dmfcv | 25.00 | 19.95 |
| **NC-18B** Wall charger for FNB-12S | 14.95 | |
| **NC-28B** Extra wall charger for FNB-9/10/17 | 14.95 | |
| **NC-34B** Wall charger for FNB-14 | 14.95 | |
| **NC-37** 1-hr desk cgr; FNB-12S/14/17 .....Df | 125.00 | 119.95 |
| **PA-6** Mobile DC adapter/cgr; FNB-9/10/14/17 | 31.95 | |
| **YH-2** Lightweight VOX headset w/mic | 30.95 | |
| **FT-10/40B-A06** 2.5w 2m HT/6 keypad/30 ch | 309.00 | 249.95 |
| **FT-10/41B-A06** 5w 2m HT/6 keypad/30 ch | 319.00 | 259.95 |
| **FT-10/40B-A16** 2.5w 2m HT/16 key/30 ch | 339.00 | 269.95 |
| **FT-10/41B-A16** 5w 2m HT/16 keypad/30 ch † | 349.00 | 269.95 |
| **FT-10/40B-A16D** 2.5w 2m HT/16 key/99 ch .† | 369.00 | 289.95 |
| **FT-10/41B-A16D** 5w 2mHT/16 keypad/99ch † | 379.00 | 249.95 |
| **FT-10/40B-A16S** 2.5w 2m/16key/99ch/DVR † | 389.00 | 299.95 |
| **FT-10/41B-A16S** 5w 2m/16 key/99ch/DVRS † | 399.00 | 309.95 |
| **FT-40/40B-A06** 2w 440 HT/6 keypad/30 ch | 339.00 | 274.95 |
| **FT-40/41B-A06** 5w 440 HT/6 keypad/30 ch | 349.00 | 284.95 |
| **FT-40/40B-A16** 2w 440 HT/16 key/30 ch | 369.00 | 299.95 |
| **FT-40/41B-A16** 5w 440 HT/16 key/30 ch | 379.00 | 304.95 |
| **FT-40/40B-A16D** 2w 440 HT/16 key/99 ch ...† | 399.00 | 309.95 |
| **FT-40/41B-A16D** 5w 440 HT/16 key/99 ch ...† | 409.00 | 319.95 |
| **FT-40/40B-A16S** 2w 440/16key/99ch/DVRS .† | 419.00 | 329.95 |
| **FT-40/41B-A16S** 5w 440/16key/99ch/DVRS † | 429.00 | 329.95 |
| **FT-50R/40B** 2w 2m/440 HT/FNB40/TTP .Dmwfv | 409.00 | 309.95 |
| **FT-50RD/40B** 2w 2m/440 HT/FNB40/FTT-12 | 439.00 | 349.95 |
| **FT-50RD/41B** 5w 2m/440 HT/FNB41/FTT-12 † | 449.00 | 349.95 |
| **ADMS-1C** Windows prog soft; FT-10/40/50 | 39.95 | |
| **CA-15** Charging stand; FT-10/40/50 | 27.95 | |
| **NC-60B** Wall charger; FNB-40/41/CA-15 | 14.95 | |
| **CLIP-10** Spring loaded belt clip | 7.95 | |
| **CN-2** BNC to SMA adapter: FT-10/40 | 8.95 | |
| **CN-3** BNC to SMA adapter: FT-50R | 8.95 | |
| **CSC-68** Soft case; FNB-41/FBA-15 | 16.95 | |
| **CSC-69** Soft case; FNB-40 | 16.95 | |
| **CSC-V10** Cordura soft case; FT-10/40/50 | 27.95 | |
| **CT-27** Cloning cable | 10.95 | |
| **CT-30** Microphone Y adapter | 10.95 | |
| **EDC-5B** DC adapter w/noise filter | 26.95 | |
| **EDC-6** DC adapter; plug & wire only | 7.95 | |
| **FBA-15** AA battery holder | 19.95 | |
| **FNB-40** 650ma 6v battery | 48.95 | |
| **FNB-41** 600ma 9.6v (5w) battery | 58.95 | |
| **FNB-42** 1100ma 9.6v (5w) battery | 62.95 | |

## YAESU - continued

| | Reg | Sale |
|---|---|---|
| **FNB-V47** 1100ma 7.2v battery w/belt clip .. | 55.95 | |
| **PA-17** Battery cable extender ..... | 57.95 | |
| **FNB-49*** 600ma 6v battery .....† | 38.00 | 29.95 |
| * $19.95 with purchase of any radio! Limited Time! | | |
| **FTT-10/A06** 6-key keypad/encoder/30 ch .... | 25.95 | |
| **FTT-10/A16** 16-key keypad/encoder/30 ch .. | 34.95 | |
| **FTT-10/A16D** 16-key keypad/enc/dec/99 ch | 62.95 | |
| **FTT-10/A16S** 16-key pad/enc/dec/99ch/DVRS | 81.95 | |
| **FTT-12** 16-key keypad/dec/DVRS; FT-50R ... | 62.95 | |
| **LCC-10C** Leather case/belt clip; 50/FNB41/V47 | 31.95 | |
| **LCC-10S** Leather case/swivel; 50/FNB41/V47 | 31.95 | |
| **LCC-11S** Leather case/swivel; FT50/FNB40 | 31.95 | |
| **MH-30C2B** Speaker/mic; use CT-30 also .... | 45.95 | |
| **MH-34B4B** Speaker/mic ..... | 30.95 | |
| **MH-37A4B** Earpiece/microphone ..... | 30.95 | |
| **NC-50** 1-hour dual slot charger ..... | 92.95 | |
| **CA-14** 2 charging sleeves; NC-50 ..... | 26.95 | |
| **RH-1** Rubber case protector ..... | 7.95 | |
| **VC-23** VOX headset ..... | 62.95 | |
| **YHA-54** Replacement 2m/440 BNC duck .... | 16.39 | |
| **FT-11R** 1.5w 2m FM HT/FNB-31/cgr/TTP ..... | 389.00 | 279.95 |
| **FT-11R/HP** 5w 2m FM HT/FNB-38/cgr/TTP ..... | 399.00 | 299.95 |
| **FT-41R** 1.5w 440 FM HT/batt/cgr/TTP ..... | 479.00 | 339.95 |
| **FT-51R** 2w 2m/440 FM HT/FNB-31/cgr/TTP ... | 619.00 | 479.95 |
| **FT-51R/HP** 5w 2m/440 HT/FNB-38/cgr/TTP ..... | 639.00 | 489.95 |
| **51R Clone**/CT-35 Clone cable; FT-11/41/51R | 9.95 | |
| **ADMS-1C** Windows programming software . | 38.95 | |
| **CD-2** Mobile rapid charger; FT-11/41/51R .. | 103.95 | |
| **CSC-61** Case; 11R/41R/FNB-33/38/FBA-14 | 16.95 | |
| **CSC-62** Soft case for FT-11R/41R/FNB-31 .. | 16.95 | |
| **CSC-66** Soft case; FT-51R/FNB-33/38/FBA-14 | 19.95 | |
| **CSC-67** Soft case for FT-51R/FNB-31 ..... | 19.95 | |
| **EDC-12** DC adapter; FT-11R/41R/51R ..... | 38.95 | |
| **FBA-14** AA battery holder ..... | 19.95 | |
| **FNB-31** 600ma 4.8v battery ..... | 47.95 | |
| **FNB-33** 1200ma 4.8v battery ..... | 62.95 | |
| **FNB-38** 600ma 9.6v (5w) battery ..... | 75.95 | |
| **FTS-26** CTCSS decoder ..... | 47.95 | |
| **MH-29A2B** LCD display spkr/mic; 51R ..... | 106.95 | |
| **MH-30C2B** Speaker/microphone ..... | 45.95 | |
| **MH-32A2B** Compact lapel speaker/mic ..... | 30.95 | |
| **MH-35A2B** Spkr mic/clip/earphone jack ..... | 39.95 | |
| **MH-37B2B** Earpiece/microphone ..... | 30.95 | |
| **NC-34B** Wall charger for FNB-33 ..... | 14.95 | |
| **NC-38B** Wall charger for FNB-38 ..... | 14.95 | |
| **NC-55B** Wall charger for FNB-31 ..... | 14.95 | |
| **NC-50** 1-hour dual slot charger ..... | 109.95 | |
| **CA-10** 2 charging sleeves; NC-50/11/41/51 | 14.95 | |
| **VC-22** Headset w/VOX ..... | 62.95 | |
| **YHA-54** Repleacment 2m/440 BNC duck .... | 16.95 | |
| **VX-1R** 500mw 2m/440 submini HT/lith ion ... | 349.00 | 299.95 |
| **EDC-15** DC adapter ..... | 38.95 | |
| **FBA-20** Battery holder ..... | 22.95 | |
| **FNB-52LI** Extra lithium ion battery ..... | 36.95 | |

### ANTENNA ROTORS

| | | |
|---|---|---|
| **G-450XL** 10 sq ft antenna rotor ..... | $269.00 | 239.95 |
| **G-500A** 12 sq ft elevation rotor/8-wire ..... | 319.00 | 279.95 |
| **G-800S** Med/hvy duty 450 degree 17sq ft/5-wire | 399.00 | 339.95 |
| **G-800SDX** Med/hvy duty 17sq ft/presets/5-wire | 499.00 | 429.95 |
| **G-1000SDX** HD 450 degree 23sq ft/presets/5-wire | 599.00 | 519.95 |
| **G-2800SDX** HD 450 degree 34sq ft/presets/8-wire | 1329.00 | 1139.95 |
| **G-5400B** Light/med 11sq ft az/el//2x8-wire .. | 619.00 | 539.95 |
| **Sep Kit** Separation kit for G-5400B ..... | 23.95 | |
| **GC-038** Mast clamp; 400/800/1000/5400B ... | 31.95 | |
| **GC-048** Mast clamp; G-2700/2800SDX ..... | 47.95 | |
| **GS-050** 50mm thrust bearing; mast 1¼-2" ... | 31.95 | |
| **GS-065** 65mm thrust bearing; mast 1½-2½" . | 47.95 | |
| **GS-23** Interface; G-800/1000/2700/2800SDX | 356.00 | 299.95 |
| **GS-232** Interface for G-5400B ..... | 562.00 | 469.95 |

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## ZENITH (ZEN)

**A-8477** 75 ohm high-pass filter .....Dmwfcv 9.95

## zm Xpressions (ZMX)

**What is your TNC doing?** Book ..... $ 15.00

## CLOSE-OUTS

| | | |
|---|---|---|
| **ADI AT-200** 2.5w 2m HT/batt/cgr/TTP ..mwfcv | | 149.95 |

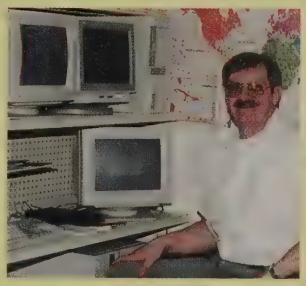
## CLOSE-OUTS - continued

| | Reg | Sale |
|---|---|---|
| **ADI AT-200HP** 5w 2m HT/batt/cgr/TTP mwfcv | | 169.95 |
| **AEA DSP-1232** 1 port multimode controller mwfv | | 599.95 |
| **AEA IT-1** IsoTuner Auto tuner; IsoLoop ...wfcv | | 229.95 |
| **AEA PCB-88** IBM plug-in packet adapt mwfcv | | 99.95 |
| **ALI DJ-480T** 440 FM HT/batt/cgr/TTP .....m | | 219.95 |
| **CES 410** Personal Patch interconnect .....mwf | | 149.95 |
| **CMT CA-1243Z** 440/1.2GHz 9.4/12.8db 7' N f | | 109.95 |
| **CMT CA-F22GF** 136-175 6db 8' 10" ....Tmwfv | | 139.95 |
| **CSY 8200D** Dplx patch/rptr controller ...mwfv | | 449.95 |
| **CSY CS-1688** Deluxe DTMF dec/controller ....f | | 169.95 |
| **CSY CS-700** Simplex interconnect .....mwfv | | 289.95 |
| **CUS 10-3CD** 10m, 3 el, 10' boom, 8 db .....wv | | 149.95 |
| **CUS 15-3CD** 15m, 3 el, 14' boom, 8 db .mwfv | | 199.95 |
| **CUS 220B** 220 Boomer, 17el, 19'bm, 17db mwf | | 129.95 |
| **CUS AV-80** 75/80m 36' vertical ant ....mwfcv | | 299.95 |
| **DIA TG-509** 2m/440 2.1/5.5db 34" glass m mv | | 129.95 |
| **HYG 215S** 7030SAT 435 MHz 30 el beam wfv | | 149.95 |
| **HYG 216S** 216SAT 2m 16el 145.9MHz bm wfv | | 159.95 |
| **HYG 232S** 215DX 2m 15 el, 28' boom .....mwfv | | 149.95 |
| **HYG 383S** 5BDQS 5-band 94' trap .....mwfv | | 169.95 |
| **HYG 1009AA** LP-1009AA 13-30 12el LP ....m | | 1049.95 |
| **HYG 1010AA** LP-1010AA 10-30 14el LP .....m | | 1499.95 |
| **ICO AH-2A** Antenna tuning system .....mv | | 499.95 |
| **ICO AT-150** 100w 9-band auto ant tuner mwv | | 499.95 |
| **ICO AT-160** Automatic antenna tuner ..mwfcv | | 249.95 |
| **ICO FL-44A** SSB filter; R-71A .....m | | 179.95 |
| **ICO IC-T41A** 440 FM HT/batt/cgr/TTP .....mwv | | 249.95 |
| **ICO IC-T42A** 440 FM HT/batt/cgr/TTP .....mwv | | 259.95 |
| **ICO IC-281H** 50w 2m FM/9600 baud ....mwfv | | 379.95 |
| **ICO IC-706** Mini Xcvr/Rcvr w/6 & 2m ..mwfcv | | 1199.95 |
| **ICO IC-728** Xcvr/SW Rcvr w/mic .....mwfv | | 1099.95 |
| **ICO IC-820H** 2m/430 SSB/FM sat Xcvr .mwfcv | | 1099.95 |
| **ICO IC-2350H** 50w 2m/35w 440 FM ...mwfcv | | 399.95 |
| **ICO IC-2700H** 50w 2m/35w 440 FM ....mwfcv | | 449.95 |
| **ICO R-1-15** .1M-1.3G AM/FM hand/cell blkd mcv | | 399.95 |
| **ICO R-71A** Shortwave receiver .....m | | 1199.95 |
| **ICO RP-2210** 25w 220 MHz FM repeater .....v | | 2099.95 |
| **ICO RP-4020/50w** 50w 440MHz FM rptr .....w | | 2399.95 |
| **JPS NF-60** Auto DSP audio spec notch filt .mwc | | 129.95 |
| **JPS NIR-10** Dlx noise/notch DSP BP filter ...mwfv | | 229.95 |
| **JPS NRF-7** Noise reducer and filter unit.mwfv | | 169.95 |
| **KAN Data Engine** TNC w/no modems .....mwv | | 269.95 |
| **KAN Data Engine w/**DE-1200 modem .....mwfv | | 329.95 |
| **KEN DRU-3** Digital recording unit .....mwv | | 129.95 |

## CLOSE-OUTS - continued

| | Reg | Sale |
|---|---|---|
| **KEN MA-5** 5band 200w PEP HF mob ant mwfcv | | 149.95 |
| **KEN TH-48A** 2w 440 FM HT/batt/cgr/TTP mwfv | | 259.95 |
| **KEN TH-235AK2** 2m HT; **no batt or cgr** mwfcv | | 149.95 |
| **KEN TM-451A** 35w 440 FM/TTP/9600 ....mwcv | | 479.95 |
| **KEN TM-642A** 2m/220 FM Xcvr w/TTP .....mf | | 729.95 |
| **KEN TS-690S** Xcvr/6m/Rcvr/mic .....mwfcv | | 1299.95 |
| **KEN UT-28S** 50w 10m unit;741/742/etc mwfcv | | 149.95 |
| **MIR B-23G** 2m FM/SSB 2/30w amp/preamp f | | 154.95 |
| **MIR C-5012G** 220 FM/SB 50/120w amp/p mwf | | 259.95 |
| **MIR C-5022G** 220 FM/SB 50/220w amp/p mwf | | 499.95 |
| **OPT 8040** Multifunction 10-dig ctr/timer mfv | | 449.95 |
| **OPT Cub** 1 MHz - 2.8GHz 9-digit mini-ctr ....c | | 139.95 |
| **OPT R-10** 30-2000MHz FM Interceptor .....mfc | | 279.95 |
| **OPT SSB-220A** SSB/gen purp 3GHz ctr .....mwfv | | 269.95 |
| **OPT Scout/400**/Scout 10-2800 freq rec/ctr mfv | | 399.95 |
| **PAL P-412X** 160-6m 20db mob Xcv pre .....m | | 139.95 |
| **PAL PK-200** Jones dual-paddle key .....mwfc | | 169.95 |
| **RFC VHF1-60** 2m 1/60w FM HT amp ...mwfcv | | 199.95 |
| **RFC 2-23** 2m FM/SSB 2/30w amp/pre mwfcv | | 99.95 |
| **RFC 3-211** 220 FM/SB 2/110w amp/pre .mwf | | 269.95 |
| **RFC UHF-50** 440 3/50w FM HT N amp .....mfv | | 249.95 |
| **RFC 4-32** 440 FM 3/20w amp/preamp .....mw | | 129.95 |
| **RFL HL-62V** 2m .5-10/6-60w amp/pre ..mwfv | | 119.95 |
| **RFL HL-36U** 440 .5-12/30w amplifier ...mwfv | | 199.95 |
| **RMS CN-220** 1.8-225 1.5kw PEP meter .mwfcv | | 119.95 |
| **SGC 55-46** QMS-1 Quick mt sys w/SG230 .m | | 799.95 |
| **STA C-168A** Dlx submini 2m HT/batt/cgr ..mwv | | 299.95 |
| **STA C-178A** 2m/440 FM HT/batt/cgr ...mwfcv | | 369.95 |
| **STA C-468A** Dlx sub-mini 440 HT/batt/cgr ..mw | | 299.95 |
| **STR ATH-10** 1-1200 MHz freq counter/ATH mc | | 159.95 |
| **TRI BC INTERNET-325** Stdby UPS 325VA mwfv | | 119.95 |
| **TRI BC INTERNET-450** Stdby UPS 450VA mwfcv | | 129.95 |
| **TRI BC INTERNET-675** Stdby UPS 675VA ..mwfv | | 199.95 |
| **VEC HF-600QSK** 1kw HF amplifier w/QSK ...m | | 1399.95 |
| **YAE ATU-2** Internal antenna tuner .....mwfv | | 239.95 |
| **YAE FP-25** Power supply for FT-990DC .....m | | 249.95 |
| **YAE FP-700** Power supply .....mwfcv | | 229.95 |
| **YAE FT-50R/40B** 2w 2m/440 HT/FNB40/TT mwfv | | 309.95 |
| **YAE FT-900/AT** Xcvr/rem/tuner w/coupon mwv | | 1269.95 |
| **YAE FT-990** Xcv/ps/desk mic w/coupon mwfcv | | 1699.95 |
| **YAE FT-5200** 50/35w 2m/440 w/coupon mwfv | | 549.95 |
| **YAE FT-7200** 35w 440 FM/TTP mic .....mwfcv | | 249.95 |
| **YAE FT-8000R** 50/35w 2m/440 FM/TT .mwfcv | | 499.95 |

## AES® On-Line...



**The AES® BBS: 414-358-3472** On-line since October 1993. At this time, we have over 1500 users in all 50 states & over 50 foreign countries.

You can find New & Used Equipment Price Lists; New Product Information; Open House & Special Activity Dates/Times; Technical Help; Freeware & Shareware Computer Programs. You can leave messages for our staff, to our BBS users and even post your equipment for sale, on-line.

The system is running OS/2 Warp, using the Gilmore Systems Magnum 9.0 software. We have two phone lines and using U.S. Robotics Courier V.Everything – 28.8 modems. The computer is an ASC PENTIUM 133.

**WORLD WIDE WEB: http://www.aesham.com** Take a look at AES® on the World Wide Web. We have: Information on each of our Branch Stores; Open House & Special Event Dates/Times; Price Lists; Links to other Ham Radio related web sites and a place to request the AES® Catalog and periodic update flyers. Stop by regularly, there are always changes being made.

**e-mail: help@aesham.com** Messages and requests for pricing can also be sent via our e-mail address to our staff and we will reply to them as soon as possible. You can also contact Orlando, Las Vegas & Wickliffe directly , as they now have their own e-mail addresses.

**HELP:** If you have any questions about AES® ON-LINE, please contact our Sysop, **Richard Engel, KE9QU** at the Milwaukee store. Richard was licensed in 1969, and has been with us for over 12 years. He is very knowledgeable in all phases of amateur radio, especially Digital Communications.

# AMATEUR ELECTRONIC SUPPLY® Used & Demo Equipment

**USED EQUIPMENT** ★ Only the Cleanest Gear accepted in trade, absolutely the finest available, anywhere! ★Fully Service Tested for original specifications ★ 10 day Trial ★ 30 day Guarantee ★ Full Credit within 90 Days on Higher Priced New Equipment

**DEMO EQUIPMENT** This is New Equipment that has been Demonstrated, on Display or Returned & Restocked. The cartons are no longer factory sealed, but each has been checked by our Service Department and carries a 100% New Warranty. *Used equipment policies do not apply.*

**LOCATION** The letters after each price indicate where the itemwas located as of May 16, 1997: **(m)** Milwaukee: (1-800-558-0411); **(w)** Wickliffe: (1-800-321-3594); **(f)** Orlando: (1-800-327-1917; **(c)** Clearwater: (1-888-226-7388); **(v)** Las Vegas: (1-800-634-6227).

## USED EQUIPMENT

**ADI**
ARC12 DESK CHGR ....69.95 mw
AT201HP ....149.95 c

**AEA**
IH CABLE....22.95 v
MACRATT W/FAX software ....49.95 m
PK12 PACKET TNC....79.95 m
38305 AC ADAPTER....9.95 w

**ALINCO**
ALR22T 25W 2m TTP mic ....229.95 w
DJ160T 3W 2m FM HT....139.95 w
DR110T 45W 2m xcvr....199.95 m
DR150T 2M 50W /UHF RX....239.95 m
DR590T 2M/440 XCVR ....399.95 cv
EBP20N (26N) 7.2V 700MA ...29.95 m
EBP22N (28N) 12V 600MA ....49.95 w
EBP36N 9.6V 650 MA ....54.95 v
EDC34 DESK CHARGER ....69.95 f
DC37 13.8V POWER CABLE ....6.95 v
EDC6 WALL CHGR ....9.95 m
EDC8B DC PWR CABLE FLTR 17.95 v
ESC30 Soft Case 34/35/36N ...8.95 v

**AMERITRON**
ALS600 HF/S-S AMP ....879.95 m

**AOR**
AR3000A COMM RCVR ....839.95 w
AR3030 COMM RCVR ....789.95 v

**ASTRON**
RS10A 7.5A ps ....59.95 v
RS12S....80.95 c
RS20A 16A ps ....79.95 c
RS35A 25A ps ....119.95 f
RS35M 25A ps....129.95 v
RS4L 4A PS ....39.95 c
SS25 20A SWTCHG P/S....103.95 v
VS20M 16A VARIABLE ....109.95 v

**AZDEN**
HS03 HF BOOM SET....35.95 m
PCS7000H 50W 2M XCVR....289.95 mw
PCS7500H 50W 6M XCVR....309.95 c
PCS7800H 50W 10M FM ....299.95 m

**BIRD**
43P PEP/PWR W/100H/50C 356.95 v
5A 25-60MHZ Element ....39.95 c

**COMET**
MS3FVMM MAG MT....28.95 v

**COM SPEC**
TE32 32 ENCODER BOX....39.95 m

**CUSHCRAFT**
PD2N PWR DIVIDER MINT ....49.95 m

**DAIWA**
CN460M 140-450 15/150W...71.95 v
CN465M 140-450 15/75W....69.95 fv

**DAVIS**
7852 RAIN COLLECTOR ....69.95 c

**DIAMOND**
K601NMO HIDE TRK MT ....49.95 m
MX214 2/220 DPLXR/CBLS ...59.95 v
MX72N 2/440 DUPLEXER ....39.95 f

**DRAKE**
R8A SWL RCVR....819.95 w
SW8 SWL RCVR ....499.95 m

**ESP**
KLR1000A 1K 110V COND ...195.95 m
KLR2000A 2K 110V COND ...395.95 m

**GRUNDIG**
YB400 SWL RCVR....169.95 c

**HY-GAIN**
HDR300 ANALOG IN BOX ....749.95 v
2400155 RADIO HEADSET ....59.95 f

**ICOM**
AD12 Ext. power adapter....16.95 m
AD14 Charge adapter ....12.95 m
AD15A....19.95 m
AT100 Auto ant tuner....289.95 c
BC72 Desk Rapid Chgr ....79.95 m
BP114 12V/400MA BATT ....39.95 m
BP152 1100MA/6V BAT....29.95 m
BP159 BATT CASE ICT21A....22.95 w
BP174 600MA 12V ....59.95 w
BP194 BATTERY CASE....16.95 c
BP4 BATT CASE IC2AT/02AT ..12.95 m
CM8 (SAME AS THE BP8)....69.95 w
CR282 HI-STABILITY XTAL....69.95 m
EX2 RELAY NO MAN, AS IS....20.95 w
HM65 SPEAKER MIC ....49.95 m
HM75 SPEAKER MIC ....35.95 f
HM9 SPEAKER MIC ....29.95 w
HS10 HEADSET/MIC ....15.95 w
ICT22A 2M HT....189.95 m
IC02AT 2m HT ....199.95 w
IC03AT 220MHZ HT ....239.95 m
IC04AT UHF HT....239.95 w
IC2GXAT/HP BP-174/130 ...239.95 cf
IC2000H 2M 50W FM....219.95 c
IC2410H 45W/35W, ....429.95 w
IC271H 100W 2M/SSB....919.95 f
IC2710H 2M/440 50/35W....569.95 v
IC281H 2M UT85/66....349.95 w
IC281H 2M XCVR....299.95 mfv
IC3200A 25W 2M/440 ....299.95 v
IC3200A 2M/440 UT-23....319.95 m
IC3220H 2M/440 MHZ ....329.95 f
IC707 HF XCVR....609.95 m
IC725 HF XCVR....639.95 wfv
IC725 HF XCVR/FL100....659.95 f
IC728 HF XCVR/UI7(FM) ....769.95 m
IC729 HF XCVR....939.95 m
IC735 HF XCVR/FL-32 ....759.95 m
IC737 HF XCVR....879.95 m
IC737 HF FL52A/SM5 ....949.95 f
IC738 XCVR NO MAN ....1,099.95 c
IC751 HF XCVR....799.95 c
IC751 HF FL32/FL52/PS ....969.95 w
IC751 HF XCVR/PS35 ....899.95 m
IC751A HF XCVR....899.95 wv
IC751A HF XCVR....899.95 v
IC751A HF XCVR/PS35 ....969.95 wf
IC761 HF XCVR....1,399.95 f
IC761 HF XCVR/EX310 ....1,429.95 w
IC761 HF XCVR/FL102....1,449.95 m
IC765 HF FL-102/UT36....1,739.95 m
IC781 HF XCVR....3,599.95 f
MB5 Mobile mt....19.95 f
PP1 Patch ....99.95 m
PS45 Compact 8A ps ....89.95 m
R71A PBT RCVR ....699.95 wcv
R71A PBT EX257/310/RC ....769.95 v
R71A PBT RCVR/RC11 ....729.95 mc
R71A SWL RCVR....689.95 m
R72 SWL RCVR....699.95 f
SM8 DESK MIC ....115.95 m
UT63 TONE SQ/W2A ....14.95 m

**JPS**
NIR10 FILTER ....199.95 wcf

**KANTRONICS**
HOSTMASTER MAC SOFT ....69.95 m

**KENWOOD**
AT300 AUTO WIRE TUNER....449.95 f
AT450 HF/AUTO TUNER ....199.95 f
BC15A DESK CHARGER ....39.95 w
BT9 AA HOLDER ....19.95 w
DRU3 DIG RECORD OPT....69.95 m
HMC2 HEADSET....39.95 f
HS4 HEADPHONES....9.95 f
IF232C LEVEL CONV....69.95 m
TS690S HF/6M scuffd ....1,019.95 m
KNB7A 800 MIL 12V ....50.95 w
KSC14 2 PACK CHG....69.95 mw
KSC15A FAST CHARGER ....39.95 w
MC50 DESK MIC ....49.95 m
MC60A DESK MIC ....99.95 c
MC90 2 HEAD DSP MIC ....169.95 m
PB17 12V 700MH ....69.95 w
PB18 LIKE NEW REFURB ....72.95 v
PB18 7.2 1100MAH ....50.95 w
PB32 6V/600 BAT....29.95 w
PB34 9.6V 600 MA ....69.95 wc
PG2W DC CORD....13.95 w
PG3H CIG CORD ....29.95 w
PG5A PKT DATA CABLE....12.95 m
PS40 20A SWITCH P/S....159.95 mf
PS52 HD P/S....189.95 v
RM76 Controller ....49.95 c
R2000 SWL RCVR....499.95 wv
R2000 SWL WORN TOP....489.95 m
R2000 SWL RCVR/VC-10....559.95 m
R2000 VC10/455C/DCK ....639.95 w
R5000 SWL RCVR....699.95 cf
R5000 SWL RCVR/VC20 ....829.95 wv
R5000 SWL RCVR/YK88A1 ..739.95 m
R5000/VC20,IC10,3 FLTR+939.95w
SMC32 MINI SPK/MIC....38.95 w
SMC34 SPKR MIC ....39.95 m
SP31 SPEAKER....69.95 cf
TH42AT/TSU8 UHF HANDI ....319.95 w
TM201A 25W 2m FM W/SP ..179.95 m
TM251A 50W 2M/TSU8....279.95 v
TM2530A 2m,NO BRKT....269.95 w
TM2550A 45W 2M XCVRr ....289.95 m
TM731A 45/35W 2m/440, ...399.95 c
TM741A 2/440 DTU2,7 ....699.95 c
TS140S HF XCVR....679.95 wfv
TS440S HF XCVR....799.95 mv
TS440S HF XCVR/YK88C ....829.95 m
TS440S HF /YK88C/88S....859.95 c
TS440S HF /YK88CN/SN ....859.95 m
TS440S/AT HF XCVR....899.95 wfv
TS440S/AT HF XCVR/VS1....929.95 w
TS440S/AT HF YK88C ....929.95 m
TS440S/AT YK88C/YK88S ...939.95 mw
TS440S/AT HF YK88CN....929.95 c
TS440S/AT HF YK88S....929.95 w
TS440S/AT HF YK88SN....929.95 fv
TS440SAT/YK88S/C/IC10 ....949.95 w
TS450S HF TU8/MB430 ....899.95 v
TS450S HF YG455C1 ....939.95 f
TS450S/AT HF XCVR....999.95 mc
TS450S/AT HF YK88CN1 ...1,039.95 c
TS520S HF XCVR/CW....429.95 m
TS530S HF XCVR....489.95 m
TS60S 6M XCVR ....799.95 c
TS711A 25W 2m SSB/FM....699.95 f
TS790A 2M/440 SSB/FM ..1,399.95 m
TS820S HF CW SVC M ....479.95 w
TS830S HF XCVR....649.95 mc
TS830S HF XCVR/YG455C ...689.95 c
TS830S HF YG455C/88C ....739.95 mw
TS850S HF XCVR....1,079.95 f
TS850S HF YG455C1 ....1,139.95 m
TS850S HF YK88SN1 ....1,119.95 v
TS850S/AT HF XCVR....1,199.95 wc
TS850S/AT HF VS2....1,229.95 v
TS850S/AT 88SN1/455C...1,279.95 v
TS870S HF DSP XCVR....1,839.95 mv
TS930S/AT HF XCVR....899.95 m
TS940S HF XCVR....1,229.95 w
TS940S HF/YG455C1....1,299.95 v
TS940S 455C1/88C1....1,349.95 m
TS940S 2 FILT/VS1/IIF10 ..1,459.95 v
TS940S/AT HF XCVR....1,399.95 m
TS940S/AT HF XCVR/IF10 .1,419.95 v
TS940S/AT HF IF10B/VS ...1,459.95 v
TS940S/AT HF YK88A1....1,429.95 m
TW4100A 2m/440 ....349.95 w
TW4100A 2m/440 TU7 ....359.95 c
VFO820 Remote VFO ....89.95 w
YG455CN1 250HZ FLTR....129.95 v

**KLM**
JV2 ANTENNA....49.95 m

**MALDOL**
MK30K ROOF,GUT,PWR MNT 129.95 m

**MFJ**
1224/1285 AS IS....49.95 v
1272MX TNC MIC SWTCH ....29.95 w
206 ANT CURRENT PROBE ....39.95 f
208 2M SWR ANALYZER ....59.95 f
283 SPK MIC SPLIT JACK ....19.95 w
346 LCD FREQ CNTR ....109.95 v
407B ELECT KEYER ....39.95 m
722 SSB/CW/NOTCH FLT ....59.95 w
752C DUAL SSB/CW FLT....69.95 w
816 SWR MTR NO MANL ....23.95 w
9030 30M CW XCVR ....119.95 w
9120B 20m CW pkg ....259.95 w
948 Tuner....79.95 v
949D tuner....89.95 mv
949EY 300W ANT TUNER ....99.95 c
986 3KW tuner ....209.95 m
989C Dlx 3KW tuner ....249.95 f

**NCG**
MH900PK EAR MIC H/SET....29.95 w

**NEWTRONICS**
GBS2000 TVRO TEST SET ....99.95 w

**OPTOELECTRONICS**
SCOUT (MODEL 25) ....359.95 f
SCOUT 400 V3.0....299.95 m

**PALOMAR ENGINEERS**
PA360 AMPLIFILTER ....29.95 w
RX100 RX NOISE BRIDGE ....69.95 v

**PANASONIC**
RFB45 SW RCVR/NO MAN....109.95 w

**PERIPHEX**
BP7S 13.2V 1200MA ....49.95 w
BP84S 7.2 1000MA BATT....25.95 w
EBP24S 7.2V 1500 MA ....49.95 w
PB13S 7.2V 1300MH....39.95 w

**RANGER**
RCI1000/A RED 151.625 ....109.95 w
RCI1000/C GRN 154.600 ....109.95 w
RCI7000 5W MARINE HT....129.95 w

**SGC**
0401 SG2000 HF XCVR....1,099.95 mv
5261 12' P/S CABLE....25.95 m
5412 SG230 150W A/T ....389.95 v

**SHURE**
526T SERIES II MIC ....89.95 m

**SONY**
ICFSW1S SWL rcvr....199.95 m
ICFSW55 SW rcvr....279.95 w
ICFSW7600 SW/NO P/S....139.95 f
ICFSW77 SWL RCVR ....359.95 mwv
ICF2002 SWL (NO MAN)....139.95 wc
ICF2010 SWL RCVR ....269.95 fv

**STANDARD**
CAW560 DUAL MIC CABLE....15.95 w
CAW570 DUAL MIC CABLE ...29.95 m
CAW579 PCKT CABLE;5718 ...15.95 mw
CMP 115 SPEAKER MIKE ....39.95 w
CNB151GY 7.2/700MA ....39.95 mw
CNB153 7.2V 1000MA ....65.95 w
CNB171 7.2 700MAH....59.95 w
CNB182 9.6V/600MA ....39.95 m
CNB184 6V/600MAH ....30.95 m
CNB401 2.4V/500MAH ....15.95 m
CSA181A RAPID CHGR ....89.95 w
C168A 2M MINI HT/TTP ....249.95 mw
C178A 2MTR/440 HT....319.95 w
C188A 2M THIN HT....199.95 m
C468A 440 HT....249.95 m
C558A 2M/440 HT/CASE ....409.95 w
C5718DA 2M/440 ....569.95 mw
C628A 440/1.2 HT/....579.95 w

**TRIPP LITE**
PR60A 48 AMP PS ....189.95 c
TRANSPAK GPS UNIT ....329.95 m

**UNIDEN**
BC2500XLT/EXTRA BATT ....249.95 m
BC590XLT SCANNER ....149.95 c
BC8500XLT 500CH....335.95 v
BC860XLT SCANNER ....149.95 w
BC890XLT W/BC 002....219.95 c
BC890XLT NO ANTENNA ....209.95 c

**VECTRONICS**
HTF1500 1.5KW HF TUNER ..309.95 mf
VC300D 300W DIG ANT TNR 139.95 f

**YAESU**
CSC29 SOFT CASE....14.95 w
CSC56 CASE;FT530/FNB25 ...15.95 f
DVS2 VOICE MODULE ....189.95 v
EDC12 DC ADAPTER/CHGR....29.95 m
FBA14 AA BATTERY PACK....15.95 f
FBA3 Battery....19.95 w
FC757AT AUTO TUNER....299.95 cf
FC800 WIRE AUTO TNR....329.95 mw
FIF232C Interface ....49.95 m
FL7000 1KW SS AMP ....1,679.95 f
FNB31 4.8V 600 MA ....39.95 m
FNB33 1200MA 4.7V 1.5 ....49.95 mw
FNB38 600MA 9.6V 5W ....58.95 m
FP700 ps....179.95 wv
FP757GX ( FT890 )....149.95 m
FP757HD HEAVY DUTY PS ...219.95 c
FRG100B SWL RCVR ....439.95 m
FRG8800 SWL rcvr ....529.95 mwv
FT10R/41BA16 30CH 2M HT199.95 m
FT1000MP HF /YF114SN...2,349.95 m
FT209RH 5W 2M ,FBA5/PA3 219.95 w
FT212RH 45W 2M ....219.95 f
FT2200 50W 2M FM XCVR ...219.95 v
FT2400H 50W 2m FM xcvr ...239.95 m
FT2700RH 2/440 FTS8/FVS1319.95 m
FT2700RH 25W 2m/440 ....289.95 w
FT33R FTS12 FTT4 ....308.95 c
FT50RD/41B 2M/440 5W HT279.95 m
FT51R/HP 2M/440 ....379.95 m
FT5200 2/440 FTS22/FRC4 .479.95 w
FT5200 2M/440 W/YSK1L...469.95 m
FT5200 2M/70CM....439.95 f
FT5200 2M/70CM NO BRKT .419.95 m
FT7400H 440 FM....349.95 m
FT747GX HF XCVR....549.95 m
FT76 FM HANDI, UHF ....179.95 w
FT767GX HF XCVR ....1,269.95 w
FT770RH 25W 440 FTS8....279.95 v
FT815 UHF HANDY....239.95 w
FT840 HF XCVR ....719.95 v
FT900/AT HF XCVR ....999.95 v
FT990 AC HF W/2KHZ ....1,389.95 c
FT990 HF xcvr ....1,359.95 mf
FV700DM VFO....49.95 m
MD1C8 mic....89.95 m
MD100A8X DESK MIC ....99.95 f
MH19A2B....24.95 w
MH30C2B SPEAKER MIKE....24.95 c
NC42 DROP-IN CHGR ....69.95 c
SP8 SPKR FOR FT1000MP ....99.95 m
YSK1L....29.95 v
YSK900 REMOTE KIT FT900 ...39.95 v

# DEMO EQUIPMENT

**ADI**
AT200HP 2M 5W HT .....159.95 f
SLC200L 5W CASE .....18.95 v
AEA ACARS SOFTWARE.....79.95 m
**AEA**
DSP232 (LESS SOFTWARE) .....329.95 m
DSP232 TNC.....379.95 mw
FAXII (SOFTWARE ONLY).....29.95 m
ITI ISOTUNER.....214.95 m
PCB88 TNC .....89.95 m
PK900 TNC - REFURB .....439.95 f
PK96 18K TNC.....179.95 m
PK96/18K MAIL DROP .....129.95 w
ST1 SAT TRAC W/SOFT .....329.95 v
**AIM**
38384 4A POWER SUPPLY .....35.95 m
**ALINCO**
DJF1T 2MTR HT .....169.95 v
DJG5TY 2M/440 HT .....341.95 c
DJS41T 440 HT.....109.95 mf
DJ582T 2M/440 HT.....309.95 f
DR600TB 2M/440 .....485.95 wf
EBP20N 7.2/700MA .....42.95 v
EBP37N 4.8V 700MAH .....29.95 m
EDC34 DESK CHARGER.....89.95 m
EDX2 HF AUTO TUNER.....279.95 m
EHM36A MIC / 1200T.....49.95 m
EME4 EAR/MIC.....29.95 v
EMS8Z SPKR/MIC.....42.95 m
**ALPHA DELTA**
DELTA 2/N 2POS.....58.95 m
RT 500MHZ PROT.....29.95 m
VRC Speaker Console.....219.95 m
2 POS SWITCH.....44.95 m
**AMECO**
OCM2K OSCILLATOR KIT.....17.95 m
PT3 2-54MHZ PREAMP.....107.95 v
TPA ACTIVE ANT .....49.95 m
**AMERITRON**
AL1500 AMP/8877 .....2,169.95 m
ATR15 1.5KW ANTENNA TU .....314.95 v
QSK5 OPEN BOX.....269.95 f
**ANLI**
AT-4 2M/70CM .....44.95 v
MC1/NMO MAG MOUNT .....19.95 m
**AOR**
AR3000 DLX/SSB/BLOCK .....949.95 v
SC2700 CASE AR2700 .....19.95 m
**ASTATIC**
TUG9 AMP DESK STAND .....44.95 v
TUG9 DESK STAND REFURB .....39.95 f
1104C .....49.95 f
**ASTRON**
RS20A 20A P/S.....89.95 f
RS4L 3A PS .....44.95 m
RS70A 50A P/S.....229.95 m
12/115 200W.....58.95 m
12/115 200W PWR INV.....59.95 w
**AZDEN**
AZ11 10M HT .....339.95 m
AZ61 5W 6M FM HT.....339.95 m
AZ61 6M HT .....349.95 m
HS03 HF BOOM MIC/HDSET .....44.95
PCS7800H 10M /TTP.....349.95 m
PCS7800H 50W 10M.....369.95 f
SDX514W SPKR/MIC .....44.95 m
**B&K**
2860A DIG MMETER.....71.95 ml
4011 SWEEP GEN.....214.95 m
**B&W**
FL10/1500 LOW PASS .....64.95 m
FL10/1500 1KW LOW PASS .....45.95 v
**BIRD**
25L 1.7-2.2GHZ CLOSEOUT .....134.95 m
**BMI**
NITELOGGER II RCDR/ACT.....62.95 m
**CES**
410 PERSONAL PATCH .....134.95 m
**COBRA**
CP473SPR.....49.95 f
GR11 H/H SCAN .....59.95 f
2010GTLWX CB BASE.....314.95 m
**COMET**
CF360A DPLXR W/LEADS.....62.95 v
CM690 MINI-METER.....69.95 m
HA4S 40-10M MOB/ANT.....159.95 m
MP4F PETITE MIC.....26.95 m
14HS 20M COIL/HA4S .....34.95 m
MS5LXNN MAG MT/COAX .....39.95 w
**COM SPEC**
ID8 AUTO CW ID'ER.....59.95 m
**CONNECT SYSTEMS**
CS800.....319.95 m
**COURIER**
M510 5W 10CH VHF HT.....242.95 m
M54 VHF HT .....179.95 m
**CUSHCRAFT**
13B2 2M BEAM ANT.....107.95 w
26B2 2M BEAM ANT.....269.95 w
APR18A RADIAL KIT.....58.95 v
AP8A HF VERTICAL.....197.95 v
A148SK STACKING KIT.....39.95 v
PD2 POWER DIVIDER.....39.95
**DAIWA**
DP810 DIG RF METER .....199.95 f
DP820 DIGITAL RF METER.....224.95 w
DP830 DIGITAL POWER .....279.95 m
**DIAMOND**
K550KM LUG MT/SO239.....62.95 m
K600M UHF/TRUNK MT.....62.95 v
K601NMO HIDEAWAY TLM .....62.95 mv
MX72N DUPLEXER .....52.95 m
SG7500NMO 2M/440 .....69.95 m
SX100 1.6-60MHZ METER .....134.95 mc
SX200 2-200MHZ 200W MTR....98.95
**DIGIMAX**
D1200 1.2GHZ .1PPM .....239.95 m
**DRAKE**
SW1 AM S/W RCVR.....242.95 w
1591 R8PC SOFTWARE.....39.95 m
7850 TECH MAN R8 .....34.95 m
**GAMBER JOHNSON**
SS100 SLIDE MOUNT.....59.95 m
**GENESYS**
CT221KE EARTALK KEN.....69.95 m
T05K THROAT MIC .....74.95 m
**GROTHE**
VS2 SIREN.....69.95 m
NO-ANTENNA IN CAR RCV ANT..17.95 m
**GRUNDIG**
YACHT BOY 230 REFURB .....69.95 f
YACHT BOY 400 SWL.....179.95 f
YB206 RECEIVER (NEW) .....39.95 v
**HEIL**
PRO MICRO4 HEADSET/MIC .....94.95 m
PROMICRO5 HEADSET/MIC .....89.95 m
PRO54 BOOM MIC/SGL SET.....99.95 m
**HY-GAIN**
CONT BOX ONLY; HDR300.....349.95 m
HDR300/A H.D. ROTOR.....899.95 v
2400-155 BOOM MIC SET .....89.95 v
303 T2X TAILTWISTER .....479.95 m
308S 80/40 ANTENNA .....99.95 m
**ICOM**
AD51 CHARGE ADAPTOR .....9.95 m
AG35 430 PREAMP.....149.95 m
AH2B BPR MOUNT/WHIP .....233.95 m
AT150 100W 9 BND AUTO .....475.95 mw
AT160 HF AUTO TUNE.....224.95 w
AT180 / IC706 TUNER .....449.95 f
BC79A DESK CHARGER.....79.95 f
BP121 7.2V/400 MAH BATTERY 34.95 v
BP151 6V 800MA BATTERY.....40.95 m
BP152 1100MA 6V BATTERY.....34.95 w
BP157 900MA 7.2V BATTERY....59.95 w
BP157A 7.2V/900MA BATTERY .59.95 m
BP7 13.2V/450MA BATTERY .....84.95 m
BP83 600MA BATTERY.....59.95 m
CP12 CIG LITR CORD .....25.95 m
HM46 SPEAKER MIKE.....39.95 fv
ICP4AT 440 HT W/UT50.....219.95 f
ICT2A 2M HT .....174.95 f
ICT2A 2M XCVR.....170.95 c
ICT22A 2M HT .....219.95 m
ICT7A V/U HT.....269.95 wf
IC2350H 2M/440 MOBILE .....359.95 v
IC2350H 2M/440 REFURB .....359.95 m
IC2410H 2M/440 MOBILE .....549.95 f
IC2700H 2M/440 REFURB .....519.95 f
IC2710H 2M/440 MOBILE .....649.95 m
IC281H 2 METER MOBILE .....341.95 c
IC481H 35W 440/9600 .....499.95 m
IC738 HF/X/KEYER/VOX .....1,229.95 v
IC775 HF XCVR .....3,200.95 v
IC775DSP HF XCVR.....3,699.95 m
IC820H 2M/440 FM/SSB .....1,199.95 m
IC821H 2M/440 FM/SSB .....1,579.95 v
LC103 CASE W21/BP130/131 ...16.95 m
LC123 CASE FOR ICZ1A .....27.95 v
LC125 CASE FOR ICT22A .....27.95 v
M56 MARINE XCVR .....219.95 m
RC11 REMOTE R71A.....98.95 m
R1-15 - CELL BLOCKED.....348.95 mv
R10-05 CELL BLOCKED.....474.95 f
R100-11 CELL BLOCKED .....719.95 v
R71A RECEIVER .....999.95 mwv
R7100-12 RCVR .....1,199.95 m
**INNOVA**
06-1310 3AH POWER PACKET...39.95 v
061101 6.5A POWER PAK.....44.95 m
**JPS**
ANC4 NOISE CANX .....149.95 m
NF60 DSP AUDIO NOTCH FILT....99.95 v
NIR10 DSP BP FILTER .....199.95 m
NIR12 NOISE/NOTCH FILTER ...299.95 m
NTR1 O.....114.95 m
**KANTRONICS**
HOSTMASTERII+ .....79.95 m
KAM PLUS TNC .....269.95 m
SUPERFAX II.....44.95 w
**KENWOOD**
AT850 TUNER.....224.95 m
IF10D INTERFACE TS50S.....80.95 v
IF232C LEVEL CONVERTER .....107.95 v
KNB7A 800MA 12V BATT.....79.95 m
MB201 MT BKT.....23.95 v
MC43S HAND MIC .....53.95 m
MC60A DESK MIC.....134.95 f
MC90 DESK MIC.....199.95 m
PB32 6V 600MAH BAT.....59.95 v
PG3B NOISE FILTER .....26.95 v
PG3E DC CORD HT'S .....24.95 m
PG3G DC LINE FILTER .....44.95 m
PG3J DC/CIG CORD .....29.95 m
PS52 HEAVY DUTY PS .....239.95 m
PS53 22.5A PS .....225.95 v
R5000 SWL RCVR .....949.95 wf
TH235A 2M HT BATT/CHGR .....179.95 f
TM261A 2 METER MOBILE .....242.95 c
TM733A 2M 440 XCVR .....425.95 m
TM733AHK2 2M/440 (CPN).....539.95 f
TS450S/AT HF XCVR.....1,199.95 m
TS790A 2M/440 FM/SSB .....1,749.95 m
TS850S/AT HF XCVR.....1,349.95 w
**KLM**
CS2 CIRCULARITY SWITCH.....49.95 m
**LARSON**
KD42/70 2M/440 BNC DUCK.....24.95 v
NMO150TLM.....43.95 v
POMM MAG MT.....25.95 m
**MAGELLAN**
MERIDIAN XL GPS .....269.95 m
**MAHA**
MHA302 2M/440BOOSTER .....149.95 m
MHBP132B 12V/900 NIMH.....52.95 m
MHBP8H 8.4V 1.8A NIMH .....59.95 m
MHFNB12 12V/900 NIMH .....52.95 m
MHFNB17 12V/900 NIMH .....44.95 m
**MALDOL**
ARS50 6 METER ANTENNA .....67.95 m
**MAXON**
GMRS10 100MW UHF HT.....59.95 m
MX49HX .....44.95 v
MX49SX/E HDST XCVR .....26.95 m
PC10 CH A HANDHELD .....24.95 m
PC10 CH E HANDHELD .....26.95 m
PC50 5CH 49MHZ /HEADSET ....44.95 m
**MFJ**
1022 ACT RCV ANTENNA.....35.95 m
1025 NOISE CANCANT.....98.99 v
1040B DLX RCVR PRESELECT...79.95 m
1112 MULTIPLE DC OUTLET .....26.95 v
1214PC MULTIMODE.....124.95 f
1272B TNC SWITCH .....35.95 mv
1272B TNC TO MIC CABLE .....35.95 m
1272BYV TNC/MIC SW .....29.95 m
1272M TNC/MIC SW.....29.95 m
1276T PACKET TURBO .....139.95 m
1278B PACTOR .....249.95 f
1287BD 1287B DISK ONLY .....35.95 m
1289 5 1/4 MULTICOM.....39.95 m
1289M MULTICOM 3.2 .....49.95 m
16010 200W RDWIRE TUNER ....34.95 v
1700B COMBOSWITCH.....62.95 f
1786 SUPER LOOP/DLX .....239.95 m
201 DIP METER .....99.95 m
284 SPK/MIC ICO/YAE/ALI.....22.95 m
286 SPKR/MIC.....22.95 m
287 SPKR/MIC.....22.95 m
306 SHORTWAVE CONV.....66.95 v
401C KEYER.....44.95 m
4114 POWER PACK .....58.95 fv
462B MULTI-READER.....144.95 mv
47B 128K MEMORY/1270/74 ....39.95 m
48B 1278B UPGRADE .....21.95 m
5080X PK232-YAESU 8 PIN.....12.95 m
5084 TNC - ICOM 8 PIN.....12.95 w
5086 TNC KEN/ALI 8 PIN .....11.95 v
5086YH KAM HF - 8 PIN .....12.95 v
5086Z PK88 - 8 PIN .....12.95 m
624D PHONE PATCH.....76.95 m
66 DIP COILS 249/259 .....17.95 v
815B 1.8 60 MHZ MTR.....62.95 w
924 440 TUNER/SWR/METER ....62.95 v
941E 300W TUNER.....89.95 f
1026 DLX NOISE CANANT.....109.95 m
1276 PACKET/PACTOR TNC.....119.95 f
209 HF ANALYZER.....84.95 w
441 SLIMLINE ECONO .....54.95 m
**MIRAGE**
BD35 2M/440 HT AMP.....159.95 m
B215G 150W 2M AMP .....299.95 m
B23 REFURB .....89.95 f
B23G 2M 2/30W.....139.95 v
B2516G 2M 25/160W AMP.....249.95 f
B2530G 2M/25/300W .....559.95 m
B34 2M AMP .....69.95 m
D1010NATV ATV AMP .....319.95 m
D15N 430 ATV AMP.....152.95 w
D26N 440 SSB/FM 2/60W .....219.95 v
D26N 440 2/60W .....219.95 m
KP1/10M IN SHACK PREAMP...112.95 m
KP1/2M PREAMP .....109.95 f
KP1/440 PREAMP.....109.95 v
KP2/2M MAST MT PREAMP.....149.95 m
MP3 UHF WATTMETER.....169.95 m
RC1 REMOTE CONTROL.....39.95 m
**NCG**
EN921 EAR ALI/STD/ICO/YAE ....40.95 m
MH900P EAR/BM MIKE.....34.95 m
MH900PK EAR/BOOM/PTT HT ....34.95 m
MP28 HEAD/BOOM MIC 34.95.....m
**OAK BAY**
CA232U UNVSL PCKT CBLE.....19.95 m
**OPTOELECTRONICS**
CUB COUNTER .....124.95 v
SCOUT V3.1.....349.95 m
SCOUT/400 .....349.95 m
**OUTBACKER**
PERTH 150W 75-10M ANT .....259.95 v
**PALOMAR**
55/1.6MHZ LOOP.....79.95 m
LA1 LOOP AMPLIFIER .....89.95 m
1.65MHZ LOOP.....79.95 m
**PERIPHEX**
BP85S.....68.95 v
EBP22S.....58.95 v
PB1 12V/1.2A KENWOOD.....54.95 m
PB13S 7.2V 1.2 A KEN .....36.95 m
PB25/26S 8.4V/1.4A .....55.95 m
**PREMIER**
SB752 POWER PACK .....49.95 m
**RACOM**
700 AUTO MORSE ID .....82.95 m
**RANGER**
RCI1000/GB 154.6/154.57 .....124.95 m
RCI1000/RB 151.6/154.57 .....124.95 m
RCI6060 MARINE .....149.95 mc
**RF CONCEPTS**
VHF160 2M 1/60W .....179.95 m
3-211 (220MHZ) 2/110.....239.95 v
144P AMP .....104.95 m
223 2M 2/30W AMP NEW .....99.95 mwc
444P AMP .....129.95 m
**ROSETTA**
WINRADIO .....589.95 m
**SANGEAN**
ATS800.....59.95 f
**SGC**
SG230 TUNER .....439.95 m
5232 HANDSET/SG2000.....129.95 m
5415 SG235 500W TUNER ..1,119.95 m
**SONY**
AN102 PORTABLE ANT .....69.95 m
ICFSW100S SWL.....314.95 w
ICFSW1000T W/ REC.....519.95 m
ICFSW30 SWL.....89.95 m
ICFSW33 SWL.....134.95 mv
ICF2010 REFURB .....339.95 f
**STANDARD**
CBT151 BATT CASE.....19.95 m
CBT160 BATT CASE.....14.95 m
CLC171 CASE.....27.95 f
CNB151 7.2/700 BATT .....69.95 m
CNB157 BATT.....36.95 m
CNB163 7.2V/1A BATT .....84.95 m
CNB173 BATT.....84.95 m
C168A 2M HT .....279.95 m
C188A 2M THIN HT.....254.95 f
C288A 220 MHZ HT.....328.95 m
C5900DA.....844.95 f
**STARTEK**
1350 1/1300 MHZ COUNTER ..107.95 m
**TIMEWAVE**
DSP 9PLUS.....179.95 v
DSP9 .....139.95 m
**UNIDEN**
BCT2 PRE-PROGRAM SCNR .....89.95 m
BC005 CTCSS .....29.95 m
BC120XLT 100CH SCAN.....134.95 m
BC177XLT .....99.95 f
BC3000XLT 400CH .....359.95 w
BC60XLT PORT SCNR.....69.95 m
BC890XLT 200 CH .....224.95 mf
HH979 5W MARINE HT .....119.95 m
PC122XL.....116.95 w
**US TOWER**
SERV PLATFORM FOR HDX55 ..349.95 m
**VALOR**
PHF75 75MTR MOBILE ANT.....22.95 v
**VECTRONICS**
HFT1500 1500W TUNER.....349.95 m
PM30HF SWR/POWER MTR.....64.95 v
PM30UV VHF/UHF METER .....71.95 v
VC300D.....159.95 f
VC300M .....89.95 m
**WELLER**
WSTA3 PYROPEN LP .....79.95 m
WTCPT SOLDERING STA.....99.95 m
W60P 60W IRON.....49.95 m
**W2AU**
W2DUHF HF 1:1 CHOKE BALUN .14.95 m
80M DIPOLE O NEW IN BOX.....19.95 m
**YAESU**
CA10 CHARGE ADAPTER .....11.95 m
CSCV10 CASE .....22.95 m
CSC67 SOFT CASE .....16.95 v
CSC69 CASE FOR FNB40.....13.95 m
DVS2 DIG'L RECORDER.....199.95 m
EDC12 MOB DC ADPTR .....34.95 m
FL7000 SS AMP.....1,949.95 f
FNB14 BATTERY.....63.95 v
FNB31 600MA 4.8V BAT.....41.95 v
FNB33 1200MA/4.8V BAT.....49.95 m
FNB42 9.6V/1100MA.....49.95 mv
FRC4 PAGER UNIT.....34.95 m
FTS27 CTCSS .....42.95 f
FT10/40BA16 2W 2M HT .....229.95 m
FT10/41BA16 5W 2M HT .....239.95 mf
FT1000MP - REFURB .....2,749.95 f
FT11R/HP 5W 2M HT .....269.95 mc
FT23R 2M 2W HT.....199.95 m
FT3000 2M 70W FM .....409.95 m
FT50R 2W 2M/440 HT .....299.95 m
FT50R/41B.....287.95 w
FT51R/HP 2M/440 /FNB38 .....431.95 w
FT5100 2M/440 MOBILE .....449.95 mf
FT5200 2M/440 MOBILE .....539.95 w
FT736R 2M/440SSB/CW .....1,869.95 m
FT840 HF XCVR .....749.95 m
FT990 XCVR/MD100A8X .....1,709.95 v
G5400B AZ/EL ROTOR.....499.95 m
MD1C8 DESK MIC .....109.95 mf
MH19A2B EARPC/MIC.....26.95 m
MH30C2B SPKR MIC .....39.95 v
MH32A2B SPEAKER MIC .....24.95 m
MH34B4B SPEAKER MIC .....27.95 m
NC29 CHARGER .....64.95 f
NC37 CHARGER .....107.95 f
NC55B CHGR FOR FNB31 .....11.95 v
NC60B CHRGR FNB40/41 .....9.95 m
SP3 SPEAKER.....19.95 m
VXR5000 VHF RPTR .....1,079.95 m
VXVPL1 RPTR PGM CBL/SOFT...49.95 m
YH2 BOOM MIC/HEADSET.....24.95 m
YH77ST HEADPHONE.....44.95 m
YSK8500 REMOTE KIT .....61.95 m

**List as of 5/16/97**

## COBRA (COB)

| | Reg | Sale |
|---|---|---|
| **CP-912** 900MHz dig sp spec cordless ph | $369.95 | 249.95 |

## UNIDEN (UNI)

| | | |
|---|---|---|
| **CT-301** Cordless phone ....Dm | $ 69.95 | 39.95 |
| **DX-4519** 25 ch scrambled cordls ph .....Dfc | 129.95 | 79.95 |
| **DX-3555** 25 ch scrambled dual pad cordless | 159.95 | 109.95 |
| **EXP-9100** 900MHz dig sp spec cordless ..Dm | 459.95 | 229.95 |
| **XC-3510** 25 ch cordless phone | 109.95 | 79.95 |

## Antenna Specialists (ASP)

| | | |
|---|---|---|
| **MR125** Rooftop CB antenna, spring, 3/8" hole . | $ 52.50 | 49.95 |
| **MT178** Magnet mt CB antenna | 61.50 | 59.95 |
| **M-906** Cellular style on glass CB antenna .... | 62.50 | 59.95 |

## CHEROKEE (CHR)

| | | |
|---|---|---|
| **AH-27** Handheld CB | $169.95 | 119.95 |
| **AH-100** SSB/AM handheld CB | 399.95 | 279.95 |
| **CBS-1000** SSB/AM Base CB | 449.95 | 299.95 |

## COBRA (COB)

| | | |
|---|---|---|
| **7 Ultra** AM Mobile CB | $ 59.95 | 49.95 |
| **10 Ultra AT** AM Mobile CB w/magnet mt ant . | 79.95 | 59.95 |
| **18 Ultra** AM Mobile CB | 99.95 | 69.95 |
| **18WX ST** Sound Tracker AM Mobile CB w/WX . | 99.95 | 79.95 |
| **19DX II** AM Mobile CB | 69.95 | 49.95 |
| **19LTD II** AM Mobile CB | 79.95 | 59.95 |
| **19 Ultra II** AM Mobile CB | 69.95 | 49.95 |
| **21LTD WX** AM MobileC B w/WX | 119.95 | 89.95 |
| **25LTD** (25 Classic) AM Mobile CB | 139.95 | 99.95 |
| **25LTD ST** Sound Tracker AM Mobile CB | 149.95 | 119.95 |
| **25LTD WX** AM Mobile CB w/WX | 169.95 | 109.95 |
| **25WX ST** Sound Tracker AM Mobile CB w/WX . | 169.95 | 129.95 |
| **29LTD** (29 Classic) AM Mobile CB | 179.95 | 129.95 |
| **29LTD ST** Sound Tracker AM Mobile CB | 189.95 | 149.95 |
| **29LTD WX** AM Mobile CB w/WX | 199.95 | 139.95 |
| **29WX ST** Sound Tracker AM Mobile CB w/WX . | 199.95 | 159.95 |
| **HH-70T** AM Remote CB | 149.95 | 109.95 |
| **93LTD WX** AM Base CB w/WX/tone alert | 189.95 | 129.95 |
| **148GTL** SSB/AM Mobile CB | 279.95 | 199.95 |
| **148F GTL** SSB/AM Mobile CB | 319.95 | 219.95 |
| **2010GTL WX** SSB/AM Base CB w/WX | 539.95 | 349.95 |
| **HH-35** AM portable CB Xcvr | 89.95 | 69.95 |
| **HH-36ST** Sound Tracker handheld CB | 89.95 | 69.95 |
| **HH-40** 5w 40 ch CB walkie-talkie .....Dmwf | 159.95 | 79.95 |
| **AT-60** Trunk lip/roof mt CB antenna .....Dmwf | 19.95 | |
| **AT-70** Magnet mt CB antenna | 19.95 | |
| **FRS-200** Family radio service handheld | 159.95 | 129.95 |

## MIDLAND (MID)

| | | |
|---|---|---|
| **75-510** Family radio handheld/batt/cgr | $199.95 | 169.95 |
| **22-410** Speaker/mic for 75-510 | 34.95 | |
| **22-430** Throat mic/ear/PTT box; 75-510 | 69.95 | |

## UNIDEN (UNI)

| | | |
|---|---|---|
| **PC-66XL** AM Mobile cb | $129.95 | 89.95 |
| **PC-76XL** AM Mobile cb | 179.95 | 109.95 |
| **PC-76XLW** AM Mobile cb w/WX alert | 189.95 | 129.95 |
| **PRO-340XL** 40 ch portable cb w/rubber ant .. | 89.95 | 59.95 |
| **PRO-350XL** 40 ch handheld CB radio | 149.95 | 99.95 |
| **PRO-501XL** AM Mobile CB | 49.95 | 39.95 |
| **PRO-510XL** AM Mobile CB | 69.95 | 44.95 |
| **PRO-510AXL** AM Mobile CB w/mag mt ant | 69.95 | 49.95 |
| **PRO-520XL** AM Mobile CB | 89.95 | 59.95 |
| **PRO-538W** AM Mobile CB w/WX | 109.95 | 74.95 |
| **PC-122XL** SSB/AM Mobile CB | 199.95 | 129.95 |
| **Grant-XL** SSB/AM Mobile CB | 269.95 | 169.95 |
| **Washington** SSB/AM Base CB | 349.95 | 249.95 |
| **ESP-26** External speaker | 16.95 | |

## AOR (AOR)

| | | |
|---|---|---|
| **SC-2700** Soft case for AR-2700 .....Δmv | $ 24.95 | 19.95 |
| **AR-3000A** .1-2036MHz dlx w/SSB/cell blkd ... | 1329.95 | 1049.95 |
| **MM-1** Mobile mounting bracket; AR-3000A | 24.95 | |
| **SDU-5000** Spec disp; AR3000A/Icom Base . | 1199.95 | 899.95 |
| **AR-5000** .01-2600MHz scan/cell blkd/spec ord | 2199.95 | 1799.95 |
| **SAC-8000** Opt Scout/AR8000 connect kit | 29.95 | |
| **SC-8000** Soft case for AR-8000 | 24.95 | |

## Antenna Specialists (ASP)

| | | |
|---|---|---|
| **MONR1** H or U low profile roof mon ant ..Dmw | $ 23.50 | 19.95 |
| **MON-9** H & U magnet mt monitor ant .....Dmf | 35.25 | 29.95 |
| **MONR31** L/H/U gain ground plane base ant .. | 74.00 | 69.95 |

## BMI (BMI)

| | | |
|---|---|---|
| **Nitelogger II** Auto recorder activator | $ 69.95 | |
| **RC-1A** Impedance matching patch cord | 19.95 | |

## CHANNEL MASTER (CHA)

| | | |
|---|---|---|
| **5094A** 4-band base Monitenna ant w/50' coax . | $ 47.95 | 39.95 |
| **5095A** 5094A ant/5' trimast/50' coax Dmwfcv | 59.95 | 49.95 |

## MAXON (MAX)

| | | |
|---|---|---|
| **WX-70** Weather monitor w/alert | $ 69.95 | 39.95 |

## Monitor America (MON)

| | | |
|---|---|---|
| **Monitor America** Scanner frequency book | $ 29.95 | |

## GROTHE (GRO)

| | Reg | Sale |
|---|---|---|
| **VS-2** Emergency vehicle siren | $ 99.00 | 89.95 |
| **VS-2L/A** Window mt siren/amber light | 249.95 | |
| **VS-2L/B** Window mt siren/blue light | 249.95 | |
| **VS-2L/R** Window mt siren/red light | 249.95 | |
| **VS-2LS/A** Window mt siren/amber strobe | 299.95 | |
| **VS-2LS/B** Window mt siren/blue strobe | 299.95 | |
| **VS-2LS/R** Window mt siren/red strobe | 299.95 | |
| **VS-3** Volunteer vehicle PA/horn w/spkr | 159.00 | 129.95 |
| **VS-4** P/A emergency vehicle siren w/spkr | 169.00 | 139.95 |

## UNIDEN BEARCAT (UNI)

| | | |
|---|---|---|
| **BCT-2** Pre-prog warning scan/AC ps .....Df | $239.50 | 99.95 |
| **BC-147XLT-1** 16 ch prog scanner/instant WX .. | 169.95 | 99.95 |
| **BC-148XLT-1** 20 ch prog scanner/WX alert | 179.95 | 99.95 |
| **BC-178XLT** 100 ch prog scan/air/WX alert | 249.95 | 139.95 |
| **BC-350A** 50 ch prog/service search w/AC ps . | 199.95 | 119.95 |
| **BC-560XLA** 16 ch prog scanner/AC ps | 169.95 | 99.95 |
| **BCT-7** Pre-prog warning scan/air/800/AC ps . | 319.95 | 189.95 |
| **BCT-10** Pre-prog highway info sys scanner | 369.99 | 179.95 |
| **BCT-12** Pre-prog mobile warning scanner | 319.95 | 199.95 |
| **BC-700A** 50 ch prog/svc search/800/AC ps | 299.95 | 169.95 |
| **BC-760XLT** 100 ch prog/svc search/800/AC ps | 369.95 | 219.95 |
| **BC-002** CTCSS tone board; BC-760XLT | 51.95 | |
| **BC-003** Switch box for BC-002 | 10.95 | |
| **BC-004** RF preamp for BC-760XLT | 27.95 | |
| **BC-860XLT** 100 ch prog scanner/air/800 | 319.95 | 189.95 |
| **BC-890XLT** 200 ch 956 MHz scanner/WX alert | 439.99 | 249.95 |
| **BC-002** CTCSS tone board; BC-890XLT | 51.95 | |
| **BC-9000XLT** 500 ch 25MHz-1.3GHz | 769.95 | 429.95 |
| **BC-005** CTCSS tone board; 8500/9000XLT . | 37.95 | |
| **BC-60XLT-1** 30 ch prog pocket scanner | 169.95 | 99.95 |
| **AD-100** AC adapter/batt cgr | 16.95 | |
| **PS-001** DC power cord | 8.95 | |
| **BC-80XLT** 50 ch prog pocket scanner/800 | 309.95 | 169.95 |
| **BP-70** Extra battery for BC-70XLT .....Δm | 27.95 | |
| **AD-140** Extra charger; BC-100XLT/200XLT | 13.95 | |
| **BP-200** Extra battery; BC-200XLT | 32.95 | |
| **BP-205** Extra battery; BC-100XLT | 37.95 | |
| **BC-120XLT** 100 ch prog pocket w/aircraft | 249.95 | 149.95 |
| **BC-220XLT** 200ch prog pocket/800 MHz Dmwv | 439.95 | 219.95 |
| **BC-230XLT** 200ch prog pock/air/800/xtra batt | 439.95 | 249.95 |
| **SC-150B** 100 ch black sport pocket/800 | 329.95 | 189.95 |
| **AD-70** Extra charger | 13.95 | |
| **BP-120** Extra battery | 18.95 | |
| **LC-120** Carrying case; BC120/220/230XLT . | 19.95 | |
| **LC-150B** Carrying case for SC-150B | 19.95 | |
| **UA-502** Cig power cord | 12.95 | |
| **BC-235XLT** 300ch prog pocket/trunk/xtra batt | 499.99 | 299.95 |
| **BC-3000XLT** 400 ch 25MHz-1.3GHz pocket | 699.95 | 399.95 |
| **BP-2500** Extra batt; BC-2500/3000XLT | 32.95 | |
| **LC-2500** Carrying case; BC-2500/3000XLT | 19.95 | |
| **NPD-001** National frequency book .....† | 14.95 | 9.95 |
| **RFD-001** IN/IL/KY/OH/MI/WI freq book | 14.95 | |

## COBRA (COB)

| | | |
|---|---|---|
| **RD-4120** Super heterodyne radar detect ..Dm | $209.95 | 29.95 |

## LAND MOBILE

## COURIER (COU)

| | | |
|---|---|---|
| **Procom*** 2w VHF FM hand-held/batt/cgr ..Δmf | $199.95 | 99.95 |
| **AUC-12** Cig lighter charger adapter ...Δmw | 12.00 | 5.95 |
| **CAT-12** Leather carrying case .....Δw | 22.50 | 12.95 |
| **RB-7** Extra nicad battery pack .....Δw | 32.00 | 24.95 |
| * **A**/red/151.625MHz ***B**/blue/154.570MHz * **C**/green)/154.600MHz | | |
| **M-54** 5w 4ch VHF FM hand-held/batt/cgr/151.625 | 299.95 | 199.95 |
| **M-510** 5w 10ch synth VHF FM hand-held | 399.95 | 269.95 |
| **MU-510** 5w 10ch synth UHF FM hand-held | 439.95 | 299.95 |
| **CCK-510** Cloning cable for M-510/MU-510 | 18.75 | |
| **U-22*** 2w 2ch UHF FM hand-held/batt/cgr ..Df | 279.95 | 139.95 |
| *Frequency **A** - 462.575MHz | | |

## ICOM (ICO)

| | | |
|---|---|---|
| **IC-F20-2** 2w 440-470MHz 24 ch HT .....Dm | $559.00 | 349.95 |
| **AD-54** Cgr adapt; BM113U; F10/F20 .....Δm | 34.00 | 29.95 |
| **BM-113U** Trickle charger; F10/F20 .....Δm | 26.00 | 22.95 |
| **EX-1690** PC prog software; F10/F20 .....Δm | 40.00 | 34.95 |
| **A-3** 5w PEP aircraft handheld .....Δm | 600.00 | 399.95 |
| **A-22** 5w PEP compact Navicom air handheld | 720.00 | 549.95 |
| **A-200** Panel mt aircraft Xcvr special order | 1069.00 | 839.95 |

## MAXON (MAX)

| | | |
|---|---|---|
| **MX-49FX** 5 ch 49 MHz ear mic Xcvr | $ 89.95 | 49.95 |
| **MX-49HX** 5 ch 49 MHz euro-design headset Xcvr | 89.95 | 49.95 |
| **MX-49SX*** 49 MHz euro-design headset Xcvr | 59.95 | 29.95 |
| *Available in channels **A**, **B**, & **E**; limited qty's in channel **D** | | |
| **PC-10*** 49MHz handheld/PTT/VOX headset Dmf | 59.95 | 29.95 |
| *Available in channels **B** & **E** | | |
| **PC-50** 5ch 49MHz hand-held/PTT/VOX headset | 79.95 | 49.95 |
| **GMRS-10** 100mw 462.625MHz handheld Dmw | 119.95 | 69.95 |
| **FRS-114** Family radio service handheld | 119.95 | 99.95 |
| **DV-7510** Wall charger; FRS-114 | 12/95 | |
| **WTA-9F** Ear speaker; FRS-114 | 7.95 | |

## RANGER (RAN)

| | Reg | Sale |
|---|---|---|
| **RCI-1000*** 1w 2ch VHF FM hand-held/batt/cgr | $199.00 | 139.95 |
| **BT-10** Extra nicad batteries | 29.95 | 24.95 |
| **DG-10** Desk charging stand (use wall cgr) . | 14.95 | |
| **LC-1000** Leather case | 24.95 | 19.95 |
| **MT-17** CTCSS encoder/decoder | 54.95 | 49.95 |
| **SRA-106A** Speaker/mic .....Dmf | 44.95 | 24.95 |
| **SRA-107** Speaker/mic | 44.95 | 39.95 |
| ***A** - 151.625+154.570 MHz ***C** - 154.600+154.570 MHz | | |

## MARINE VHF FM RADIO

## ICOM (ICO)

| | | |
|---|---|---|
| **IC-M10A** (01) 3w marine hand-held/AA holder | $287.00 | 179.95 |
| **M-710** (04) 150w HF marine SSB ..spec order | 2100.00 | 1399.95 |
| **M-710-05** 150w 1.6-27.5MHz SSB ...spec order | 2400.00 | 1599.95 |
| **AT-130** HF marine auto ant tuner spec order | 735.00 | 499.95 |

## KENWOOD (KEN)

| | | |
|---|---|---|
| **TKM-707** 150w HF marine SSB Xcvr spec order | 2249.95 | 1499.95 |
| **KAT-1** HF marine auto ant tuner ....spec order | 999.95 | 699.95 |

## RANGER (RAN)

| | | |
|---|---|---|
| **RCI-6060** 25w VHF marine Xcvr w/scan | $279.00 | 169.95 |
| **RCI-8000** 5w VHF marine handheld | 279.00 | 169.95 |

## UNIDEN (UNI)

| | | |
|---|---|---|
| **MC-535** 25w 90 ch VHF marine Xcvr .....† | $229.99 | 119.95 |
| **MC-635** 25w 90 ch VHF marine Xcvr/scan ..† | 269.99 | 129.95 |
| **MC-795** 25w 90 ch VHF marine Xcvr w/prog † | 299.99 | 149.95 |
| **HH-979** 5w 90 ch mar hand-held/scan .Dmfc | 259.99 | 139.95 |
| **HH-940** 5w VHF marine hand-held | 314.99 | 159.95 |
| **HH-955** 5w VHF marine hand-held | 259.99 | 129.95 |
| **HH-980** 5w 90 ch deluxe marine hand-held † | 429.99 | 209.95 |

## SHAKESPEARE (SHA)

| | | |
|---|---|---|
| **396-1** 3 db, 5' antenna, less mount | $107.50 | 59.95 |
| **497** 6 db, 8' antenna, less mount | 88.95 | 49.95 |
| **5202** 6 db ant w/chrome ferrule, less mt | 133.95 | 69.95 |
| **5206-C** Economy 8' ant w/chrome ferrule, no mt . | 56.95 | 39.95 |
| **366H** Chrome zamac ratchet mount | 42.95 | 29.95 |
| **495** White plastic lift & lay mount | 21.50 | 14.95 |
| **420** 3 db, 5' ant w/fold-down mount | 97.50 | 59.95 |
| **420-M-2** 3 db, 5' mast mount antenna Δmwf | 119.50 | 14.95 |
| **5204-8** Combo CB/VHF marine 8' antenna | 192.50 | 99.95 |

## AES 12vdc ACCESSORIES (AES)

| | | |
|---|---|---|
| **SB-115** AC-DC 5A converter | $ 49.95 | |
| **SB-151** 300w DC to AC inverter | 79.95 | |
| **SB-155** 140w DC to AC inverter | 59.95 | |
| **SC-107** Triple socket lighter plug | 14.95 | |
| **SC-146** Double socket lighter plug | 12.95 | |
| **SC-189** Rechargeable florescent lantern | 59.95 | |
| **SC-192** Multi-purpose 4-in-1 12v worklight .. | 19.95 | |
| **SC-193** 12v turbo-vac | 19.95 | |
| **SC-199** Compact cordless spot/yellow casing | 39.95 | |
| **SC-702** Recharge halogen light, 500K candle | 39.95 | |
| **SC-784** Quartz halogen spot, 400K candle | 24.95 | |
| **SC-812** Florescent work light/upright stand .. | 14.95 | |
| **SC-7848** Quartz halogen spot, 1M candle | 34.95 | |

## X-10 Home Automation/Security (X10)

| | | |
|---|---|---|
| **CK-11A** X-10 ActiveHome automation/win soft | $119.99 | 99.95 |
| **DS-7000** 7-piece home security system | 269.99 | 199.95 |
| **PK-9** REX-10 barking dog alarm | 79.99 | 69.95 |
| **AM-466** 3-pin grounded appliance module | 16.99 | |
| **AM-486** 2-pin polarized appliance module | 15.99 | |
| **DS-10A** Long range door/window sensor | 31.99 | |
| **DW-534** Door/window sensor | 21.99 | |
| **KF-574** Key fob security remote control | 26.99 | |
| **LM-465** Lamp module | 15.99 | |
| **MC-460** 6 function 8 unit mini controller | 15.99 | |
| **PH-508** Remote 110 db siren | 59.99 | |
| **PR-511** 2 floodlite motion detect/rem light | 64.99 | |
| **RW-694** 4 unit wireless wall switch | 21.99 | |
| **RW-724** 3 unit+dimmer wirelsss wall switch | 19.99 | |
| **RW-6900** Wireless wall switch set | 31.99 | |
| **SC-503** 6 function 16 unit maxi controller | 29.99 | |
| **SH-10A** Indoor 90 db remote alarm siren | 31.99 | |
| **SP-554A** Wireless motion detector | 59.99 | |
| **SR-227** Wall receptacle module/custom plate | 21.99 | |
| **TH-2807** Thermostat set-back controller set . | 21.99 | |
| **WS-467** Wall switch module | 15.99 | |

## PrimeCo PCS PHONES (PRI)

| | | |
|---|---|---|
| **111597** QCP1900 PCS phone | $179.00 | |
| **111596** Sony PCS phone | 199.99 | |
| **110108** Extra lithium ion battery | 59.99 | |
| **110174** Cigarette adapter | 29.99 | |
| **110180** Black carrying case | 19.99 | |
| **110181** Portable hands-free kit | 89.99 | |
| **110182** Antenna 3 db | 29.99 | |

**Scan the Action! • Ham Radio • Police, Fire • Emergency• Weather • More !**

BC-147XLT-1
BC-148XLT-1
BC-178XLT-1

**BC-147XLT-1**
16 channel Base unit with 10 bands, including weather. Covers 29-29.7, 29.7-50, 50-54, 136-144, 144-148, 148-174, 406-420, 420-450, 450-470 & 470-512 MHz. Two-digit LED display for current channel selection & scanning. Keyboard Entry; Direct Channel Access; Manual Step Tuning; Lockout; Priority; Review; Weather Search; Auto. Squelch; Track-Tuning; Memory Back-up. 9"w x 2¾"h x 6½ "d, 1.2 lbs ..... **$99.95**

**BC-148XLT-1**
20 channels, 10 bands with weather alert. Digital; Programmable; AC/DC operation. Frequency coverage: 29-54, 136-174 and 406-512 MHz. Weather; Priority; Lockout; Squelch. AC adapter & telescoping antenna. 9"w x 2¾"h x 6½"d, 1.2 lbs ..... **$99.95**

**BC-178XLT**
100 channel programmable Base unit with aircraft. 11 bands, 5 scanning banks. LCD display; TurboScan™ & search; Weather scan & search; 5 priority channels; Data skip; Service search; Automatic squelch; Programmable delay. AC adapter. 9" x 6½" x 2¾", 1 lb. 7 oz ..... **$139.95**

BC-350A
BC-700A

**BC-350A**
50 channel Mobile or Base unit with Aircraft; 11 bands, LCD display; Super Turboscan™ @ 100 channels/second. 20 programmable Private Channels; 20 programmable Police Channels; 10 programmable Fire & Emergency channels. Band scan for aircraft; Marine & weather; Band search. Mt. bracket; AC adapter, DC & cigarette power cords included. 5¾"x 6 1/16" x1⅜", 1 lb. 11 oz ..... **$119.95**

**BC-700A**
50 channel programmable Mobile/Base unit with Aircraft. 12 bands, LCD display, Turbo Scan™. Same as BC-350A w/800MHz (no cellular) ..... **$169.95**

BC-560XLA
BC-560A
BC-760XLT

**BC-560XLA**
16 channel, programmable mobile unit. 10 bands: 29.0-29.7, 29.7-50, 50-54, 136-144, 144-148, 148-174, 406-420, 420-450, 450-470 & 470-512MHz. Pushbutton Entry; Two-Digit LED Display; Review Key; Priority; Memory Back-up; Channel Lockout; Direct Channel Access; Weather Search; Built-in Delay; Track Tuning. 13.8V DC. AC adapter, mobile bracket. 6¾"w x 1⅜"h x 5½ "d, 1¼ lbs ..... **$99.95**

**BC-760XLT**
100 programmable channels, 5 scanning banks, 12 bands + Weather. Covers 29-54, 118-136, 144-174, 406-510, 470-512 & 806-956 MHz (no cellular). Auto search; Priority. 13.8V DC, AC adapter. 6"w x 1⅜ "h x 7¾ "d, 1 lb, 3 oz ..... **$219.95**

860XLT
890XLT

BC-9000XLT

**BC-860XLT**
Programmable scanner with Aircraft. 100 channels, 12 bands, 10 banks. Covers 29-956 MHz (cell blkd). Full frequency LCD display; TwinTurbo™ Scan & Search; One-touch weather; Manual channel access; Auto. squelch. 9"w x 2 ¼"h x 6½"d, 1.2 lbs ... **$189.95**

**BC-890XLT**
200 channel programmable Mobile/Base w/Aircraft, Military Air & 1¾ meter Ham Band. 14 bands, 10 scanning banks. LCD display, TurboScan™; 10 priority channels; VFO; Frequency transfer; Autostore & sorting; Count; Weather alert; Opt. CTCSS; AC adapter. 10½" x 7½" x 3½", 3¾ lbs ..... **$249.95**

**BC-9000XLT**
500 channel continuous band scanner, covers 25-1300 MHz (cell blkd). 20 banks. VFO control; Ten priority channels; AM-FM/wide & narrow FM modes; TurboScan™ and Search; LCD dot matrix alpha display; Data skip; Transfer; Automatic store; Aux. line output for recording; AC adapter, optional CTCSS. 10½" x 7½"d x 3½"h, 4 lbs ..... **$429.95**

## uniden HANDHELDS

BC-60/80XLT
BC-120/230XLT
BC-3000XLT

**BC-60XLT-1**
30 channel, programmable handheld scanner. 10 bands, 29-512 MHz. Full frequency LCD display; Programmable chain search; One touch weather; Lockout; Memory backup; Low-battery indicator; Keypad lock; Built-in scan delay; Manual channel access; Track tuning; Keypad lockout, AC/DC operation with 4-AA alkaline or nicads or included AC adapter. 2⅝"w x 6 ¾"h x1½"d, 10½ oz ..... **$99.95**

**BC-80XLT**
50 channel, programmable handheld scanner. Covers 29-956 MHz (cell blkd). 11 bands, 5 banks, 5 priority channels, one touch weather. Manual channel access; Bands search; Full frequency LCD display; Battery-low indicator. DC or AC operation with AC adapter included, 4-AA Nicad or alkaline batteries (not included) are required for DC operation. 2⅝ "w x 6¾ "h x 1½"d, 10 ½ oz ..... **$169.95**

**BC-120XLT**
100 channel, programmable handheld scanner with Aircraft coverage. 11 bands, 10 scanning banks, LCD display, Turbo Scan™ and search. One-touch weather, 10 priority channels, data skip, memory backup. Belt clip, battery and wall charger included. 2½"w x 1¾"d x 6"h, 12 ½ oz ..... **$149.95**

**BC-230XLT**
200 channel, programmable handheld scanner with Aircraft & 800 MHz (cell blkd). 12 bands, 10 scanning banks. Programmable search. LCD frequency display, Turbo Scan™ and search. One touch weather access, 10 priority channels, data skip, memory backup. Belt clip, extra battery, wall charger. 2½"w x 1¾ "d x 6"h, 12½ oz ..... **$249.95**

**BC-3000XLT**
400 channel, continuous band scanner. Covers 25 to 1300MHz (cell blkd) in 12 bands. 20 scanning banks, 10 priority channels. VFO control; TurboScan™ and search, auto-weather, auto-store; channel lockout. Rechargeable nicad battery and charger. 2½"w x 1 ¼ "d x 6"h, 12½ oz ..... **$399.95**

**UNIDEN SC-150B**

*"SPORTCAT"* 100 channel programmable handheld scanner with Aircraft, Weather & 800 MHz band (cell blkd). Designed for the racing fan with 10 one-touch, Direct Access keys for instant selection of active sports channels. Motor Racing, Air Shows & Special Events. 12 bands; 10 scanning banks; LCD display; Programmed band search; Data skip. TurboScan™ scans at 100 channels/second, allowing instant access to up to 100 memorized frequencies in the 29-54, 108-174, 406-512 & 806-956 MHz band. 10 *preprogrammed* TurboSearch™ keys allow band-edge to band-edge frequency locating at 300 channels/second. Rechargeable battery, wall charger, flex. antenna, belt clip & earphone included. 2½"w x 1¼"d x 6"h, 12 oz., Black ..... **$189.95**

BCT-7
BCT-10/12

**UNIDEN BCT-7**
**Bear Tracker 800** Pre-programmed with all frequencies for Highway Patrol, D.O.T, Local/County Police, News, Fire, Aircraft & CB. Selectable by state (except Hawaii). 12 bands, 100 user programmable channels: Highway Patrol Priority Alert; Data Skip, Weather Scan. AC adapter & mobile mt included. 13.8VDC, 5"w x 7"d x 1⅜ "h, 1 lb, 11 oz ..... **$189.95**

**UNIDEN BCT-10**
**BearTracker Highway Information System**
A sophisticated highway alarm system with 886 pre-programmed frequencies that responds to radio signals emitted from special secondary transmitters installed on most highway patrol vehicles. Audible and visual alarms, plus signal strength LEDs indicate the presence & distance of patrols ..... **$179.95**

**UNIDEN BCT-12**
**BearTracker Highway Information System**
Covers low, high, UHF & 800MHz Highway Patrol, Police, Sheriff, Weather, News & Transportation frequencies for all 50 states and Canada. Weather emergency tone alert, priority, channel lockout, digital signal meter level meter ..... **$199.95**

AOR®

**AOR AR-3000A**
Professional Desktop Scanner Scanner/Receiver for serious wide-spectrum monitoring. Provides continuous AM/FM/SSB tuning from 100kHz - 2036 MHz (cell blkd) via keypad or dial. 400 memory channels. Scans and searches at 50 channels/second. 15 band-pass filters & low noise, wide dynamic range GaAs FET RF amplifiers. Backlit LCD display, programmable tuning steps, priority, delay, recorder activator. Operates from 9 to 16V DC. Includes 120V AC adapter, BNC telescopic whip and DC lead. 5½"w x 3"h x 7⅞"d, 2.5 lbs ..... **$1049.95**

**CHEROKEE™**

**AH-50 6 Meter FM Handheld**

- 5½" tall • 50–54 Mhz Frequency Range 5W Power Output • CTCSS Capability 5 Memories for Complete CTCSS & Repeater access • Full frequency auto-scan, and memory only auto scan
- Long life 12V Ni-Cad Battery pack
- Low Battery warning Indicator

**$199.95**

## maxon SYSTEMS Personal Communicators

*Low Power • 1/4 mile average range • No license*

**Dual conversion superheterodyne receiver provides crisp, clear voice transmission. Compatible use for group communications. Push-to-talk (PTT) or Voice activated (VOX) lets you talk-to-transmit.**

CHANNELS: (A) 49.830 MHz (B) 49.845 MHz (C) 49.860 MHz (D) 49.875 MHZ (E) 49.890 MHz

**MX-49SX** • A single-channel unit featuring a lightweight adjustable headset with retractable whip antenna and boom microphone with windscreen. LED power indicator, battery charger jack. Range up to 1/4-mile. Requires (2)-AA alkaline or rechargeable batteries. 5"w x 2½"h x 1"d, 9 oz. Channel A, B, or E. ..... **$29.95**

**MX-49FX** • 5 selectable channels. The unique earphone/microphone picks up voice vibrations from the ear canal for the transmit, audio and also provides received audio. Will not interfere with helmets. Built-in antenna gives up to 1/8-mile range. Remote PTT button and channel selector. Requires (3)-AA batteries. 5½"w x 3"h x 1"d 6 oz. Channels A, B, C, D & E ..... **$49.95**

**MX-49HX** • 5 channels, great for motorcycling, snow mobiling, etc. The helmet–adaptable headset has a whip antenna and boom microphone with windscreen. VOX or PTT with on-unit or remote switch. Front mounted off/on and volume, VOX sensitivity and channel selector. Jacks for optional passenger intercom headset. Requires (3)-AA batteries. 5½"w x 3"h x 1"d, 6½ oz. Channels A, B, C, D & E ..... **$49.95**

## Low Power VHF & UHF Handhelds

**Ideal for Short Range Communications**

- Recreation
- Construction
- Factories
- Security etc.

**COURIER M-510** 10 synthesized VHF channels programmable from 144 to 174MHz. Full 5W output. Rechargeable nicad battery, AC charger, flexible antenna, F.C.C. license is application included. 4⅛"h x 2⅜"w x 1⅜"d, 15 oz ..... **$269.95**

**COURIER MU-510** 10 synthesized UHF channels programmable from 450MHz to 470MHz. 5W output. Rechargeable nicad battery, AC charger, flexible antenna, F.C.C. license application is included. 4⅛"h x 2⅜"w x 1⅜"d, 15 oz ..... **$299.95**

**COURIER M-54** VHF, 4 channels, 5W. 151.625 MHz installed. 5¼ "h x 2⅜"w x 1½"d, 15 oz. **$199.95**

**RANGER RCI-1000** Two VHF channels, 1W output. Includes two sets of crystals installed for 151.625 and 154.57MHz or 154.60 and 154.57MHz. Rechargeable nicad battery and AC charger, flexible antenna. 4⅜"h x 2½"w x ⅞"d, 12 oz ..... **$139.95**

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### Did you know? . . .

**The new Family Radio Service (FRS) allows unlicensed short range, handheld-to-handheld communications among family and friends, backpackers and skiers, business and pleasure.**

**The FCC has unlicensed the domestic use of VHF marine radios & VHF aeronautical radios.**

## MIDLAND

**75-510 Family Radio Service (FRS) UHF Transceiver**

**Great for business and family uses – hunting, fishing, camping, etc. No license required! High quality UHF FM Transmit & Receive audio for clear, crisp and interference-free communications**

500mW ouput for up to 2 miles range • 14 channels in the 462–476 MHz range • Selectable privacy codes • Scan mode for busy channel search • Automatic squelch • Large, backlit LCD readout • Keyboard lock • Timeout timer • Power save mode • Earphone jack • Includes rechargeable batteries, wall charger and belt clip. 4¾"h x 2½"w x 1¼"d, 1 lb..... **$169.95**

## RANGER Communications

**RCI-6060**

**Marine VHF Radio** • All U.S and International Channels • 4 Weather Channels • Keypad entry • All channel scanning • Direct Channel 16 Access • Dual-Watch Mode • Selectable 5 Watts or 1 Watt Output Power Up/Down Microphone Switch • Backlit LCD Display • External Speaker Jack • Weather Resistant Housing • 3"h x 7½"w x 8¼"d, 2 lbs..... **$169.95**

**RCI-8000**

**Handheld Marine VHF Radio** All USA & International Channels • 10 weather Channels • All Channel Scan • Dual Watch • Direct Channel 16 Access • 5W/1W Output • Back-lit LCD Display • Weather Resistant Housing • Rechargeable Battery with Wall Charger • External Power Jack • Time-out Timer • 2⅜"w x 1½"d x 7⅜"h, 1.2 lbs..... **$169.95**

## uniden

**MC-535 80 channel Marine VHF Radio** • All USA & International Channels • Instant CH-16 • 10 Weather Channels • Memory Scan • Dual Watch • LED Channel Display • 25/1W Output • Weather Resistant Housing • Front Speaker • 12V DC @ 5A • 6⅛"w x 7⅜"d x 2⅜"h, 2.4 lbs ..... **$119.95**

**MC-635** Same as MC-535 but 90 Channels • LCD Channel Display • 6⅜"w x 8"d x 2½"h ..... **$129.95**

**MC-795 90 channel Marine VHF Radio** Same as MC-635 but additional features: Weather Alert • Group Scan Feature • All Channel Scan • Weather Resistant Microphone ..... **$149.95**

**HH-979 90 channel Handheld VHF Radio** All USA & International w/Instant Ch-16 • 5/1W output • Rotary Channel Select • Weather Resistant Housing & Mic. • 13.8V DC or supplied ni-cd battery • 2⅜"w x 1½"d x 7"h..... CLOSEOUT **$139.95**

**HH-980 90 channel Handheld Marine VHF** Same features as HH-979 but watertight cast aluminum case • weather alert ..... **$209.95**

**IC-M10A**

**Miniature Handheld Marine VHF Radio**

Programmable for all USA and International Channels & Weather • Independent Channel 16 • 24 Memories • Full Function & Priority Scanner • Dual/Tri-watch • 3 Watts output • Power-Saver • Large back-it LCD display • CALL key for hailing channels • "AA" Alkaline battery pack provides 2-14 hours operation for each set (Batteries not included). 2⅜"w x 1⅜"d x 4⅜"h, 12 oz ..**$179.95**

## SHAKESPEARE Marine Antennas

**5202** (A) Collinear-phased 5/8-wave elements. 8 ft. long, 6dB gain, handles 50 Watts. DC grounded. Chrome-plated brass ferrule. Includes 20 ft. of coaxial cable with PL-259 connector..... **$69.95**

**497** (B) Collinear phase 5/8-wave elements. 8 ft. long, 6 db gain., handles 50 W–**not** DC grounded. Smaller diameter absorbs flex. Includes 20 ft. coaxial cable and PL-259 connector ..... **$49.95**

**5206-C** (C) Economy model, 8' long, end fed with 6dB gain. Handles 50 Watts, DC grounded. 15 ft. coaxial cable & PL-259 connector.... **$39.95**

**420** (D) Center-fed 1/2-wave coaxial sleeve model. 3dB gain, 5' ft. long. Polycarbonate lift-and-lay deck mount with leveling plate, hardware and 20 ft coax cable/connector..... **$59.95**

**495** (E) Lift-& lay polycarbonate deck mt **$14.95**

**366H** (F) Ratchet antenna mount with release handle for deck or bulkhead mounting. Has 9/32" hole for Loran cable. Standard 1"x14 male threads. Chrome plated zamac..... **$29.95**

## ICOM

**IC-A22**

**VHF Air Band Transceiver**

Covers (COM) 118.-136.975, (NAV) 108-117.95MHz and memory channels • Programmed scan, memory scan and lock • 5W output • Instant 121.5MHz • NAV features: 200 channel VOR nav with CDI, radial heading TO/FROM VOR, Auto Bearing Set • Semi-duplex, combines VOR/COM operation • Nicad rechargeable battery and wall charger • 2½"w x 7⅜"h x 1½"d, 1.4 lbs .....**$549.95**

## maxon SYSTEMS Weather Monitor

**WX-70**

**Weather Monitor** • Receives weather service broadcasts on seven N.O.A.A. stations: 162.550, 162.400, 162.425, 162.475, 162.450, 162.500, and 162.525MHz. Three different severe weather "Alert" warning modes. 110V with supplied AC adapter, uses a 9V battery for back-up.....**$39.95**

# SANGEAN T.M.

## "The World's Most Popular SHORTWAVE RECEIVERS"

## The Incredible ATS-909

WRTH

**WRTH Radio Industry Award Best Shortwave Portable 1996/7**

WRTH is a trademark of Weston-Gupiill Publications and is used with express permission

WORLD 23 YEARS LEADERSHIP

**1974 to 1997**

- AM/FM STEREO/SHORT WAVE RECEPTION
- PLL DUAL CONVERSION RECEIVER
- 306 MEMORIES ■ FULL RDS RECEPTION
- 28 SW PAGES FACTORY PROGRAMMED
- 42 WORLD CITIES FACTORY PROGRAMMED
- 5 TUNING METHODS ■ AUTO–TUNE
- ATS AUTOMATIC MEMORY PRESET
- USB/LSB SINGLE SIDE BAND SELECT
- DUAL TIME SYSTEM ■ ADJUSTABLE SLEEP TIMER
- RF GAIN CONTROL ■ PRIORITY KEY
- WIDE/NARROW FILTER ■RESET SWITCH
- 3 SEPARATE TIMERS ■ LOCK SWITCH

*AND MUCH, MUCH, MUCH MORE!!!!*

96.4 MHz PLL SYNTHESIZED RECEIVER | 307 261 x MEMO SW STATIONS | 23:30 TIME SET | 10:30 20:30 DUAL TIME | LOCK SWITCH | FM STEREO | SLEEP 59 MINUTES | ATS AUTO TUNING SYSTEM | STANDBY RADIO BUZZER PRE-PROGRAMMED | SSB USB LSB | AUTO SCAN | BATTERY | LIGHT | R•D•S RADIO DATEN SYSTEM

## *The Last Shortwave Receiver You'll Ever Need To Buy*

### SANGEAN T.M. ATS-818CS

**PLL Synthesized World Band Receiver With Programmable Cassette Recorder**

- ALL SW BANDS
- BFO FOR SSB/CW
- 45 MEMORY PRESETS
- CONTINUOUS AM RECEIVER
- RADIO/CLOCK ALARM
- DUAL TIME DISPLAY
- 5 TUNING METHODS
- ADJUSTABLE SLEEP TIMER
- WIDE/NARROW FILTER
- RF GAIN CONTROL

**ATS-818 Identical To ATS-818CS Without Cassette Recorder**

### SANGEAN T.M. ATS-606A

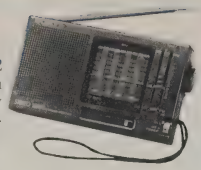
**World's Smallest Full Featured AM/FM/Stereo Shortwave Receiver**

- ULTRA COMPACT SIZE
- ALL SW BANDS
- 1 KHZ FINE TUNING
- 5 TUNING METHODS
- ATS AUTO TUNE
- 54 MEMORY PRESETS
- DUAL TIME DISPLAY
- DX/LOCAL SWITCH
- DUAL ALARM TIMER
- ADJUSTABLE SLEEP TIMER
- MEMORY SCAN/PLAY
- COUNT DOWN TIMER

**SANGEAN T.M.**
**AMERICA, INC.**

2651 Troy Avenue, South El Monte, CA 91733
Tel: (818) 579-1600 Fax: (818) 579-6806
Shortwave "Hot Line", Toll Free 1-888-SANGEAN

# SONY



**ICF-SW10**
Compact and convenient, easy to use. 12 bands; covers AM broadcast, FM (stereo with headphones) and 9 shortwave bands. Easy analog tuning with tuning indicator for accuracy. 6"w x 3½"h x 1¼"d, 12 oz. ..... **$49.95**

**ICF-SW30**
12 bands; covers AM, FM; stereo with headphones and 10 shortwave bands. Automatic Scan Tuning in1 KHz steps,15 memory presets. Clock has world and local time display, alarm and sleep timer functions.Uses three "AA" batteries or ext. 4.5V DC. 4¾"h x 6¾"w x 1 1/16"d..... **$99.95**

**ICF-SW55**
**World Band Receiver.** Similar to ICF-7600 (below), but improved. Factory preset name tuning provides access to most listened to broadcasts. Tuning methods: preset station, direct, scan or rotary dial. 125 memories. Requires (4)"AA" batteries or ext. 6V, AC adapter included. 4¾"h x 7⅞"w x 1 3/16"d, 1½ lbs..... **$349.95**

**ICF-SW1000T**
**World Band Receiver.** Includes a full-featured Stereo Cassette Recorder and Player built in to the back. Provides 1 kHz step tuning LW/MW/SW/FM & SSB mode reception with synchronous detection via 10 key direct access and 32 memory presets. FM stereo reception via headphones. Built-in clock with alarm and sleep timer Timer Record/Play feature allows convenient time shift recording. Stereo microphone and headphones, active antenna and carrying case supplied ..... **$549.95**

Front view

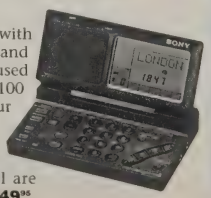
Rear view

**ICF-2010**
Covers 150KHz-30MHz, 76-108MHz and 116-136MHz MHz; AM/FM/SSB/CW. Tunes manually or by keyboard entry, automatic scanning, memory scan or 32 memory presets. LCD display, switchable IF bandwidth, fine tune. Convenient 12 and 24-hour clock with alarm, programmable timer and sleep timer. Telescoping antenna and built-in ferrite bar antenna, Nice sounding 4" speaker. Record, earphone, external antenna and external DC power jacks. Operates from (3)"D" and (2)"AA" batteries, external 12V DC, or 110V AC adapter. 6½"h x 11⅜"w x 2⅜"d, 3¾ lbs..... **$359.95**

**ICF-SW77**
Same coverage (except for air band) and same-features as the ICF-2010 (above). Stores up to 100 stations (162 frequencies), allows stations to be selected by name and is capable of storing your favorite broadcast schedules. Programmable six-character Station Name Display, fine/accurate 50 Hz tuning resolution, FM stereo with headphones. Bass and treble controls. 10⅞"w x 6⅞"h x 1⅞"d, 3¾ lb ..... **$469.95**

**ICF-SW7600G**
**World Band Receiver** • Covers 150kHz to 30MHz and 76 to 108MHz FM; stereo with earphones. Synchronous AM detection, SSB capability. 10-key Direct Access Tuning™ and 20 station presets, LCD display. Tone control, external antenna and recording jacks, clock and timer with sleep and standby functions, tilt bracket. Includes compact reel-out antenna, and carrying case. Requires (4) "AA" batteries. 4½"h x 7½"w x 1¾"d, 1½ lbs..... **$189.95**

**ICF-SW100S**
**The size of a Pocket Calculator**, but loaded with advanced features. Covers 150kHz to 30MHz and the 76 to 108 MHz FM band; stereo when used with with earphones. SSB reception capable, 100 Hz tuning. steps, 50 memory presets, 24 hour clock/timer, world time computer, station names display, illuminated LCD display. AC adapter, stereo earphones, active antenna, soft carrying case, station directory and manual are included. 4¾"h x 2⅞"w x 13/16"d ..... **$349.95**



# GRUNDIG

**YACHT BOY 400**
Covers 1.6–30MHz, all SW bands + FM-stereo (with earphones), AM and long wave. Direct keypad frequency entry or scan tuning with 40 memories. SSB reception with fine tuning control, high-low tone switch. Tilt stand, telescoping antenna. Multi-function backlit LCD display shows dual zone 24 hour time, frequency, band and signal strength. Dual selectivity. Automatic turn-on and sleep timer. Includes stereo earphones external reel-up antenna for SW, and carrying pouch. Requires 6 "AA" batteries or ext. 9V DC. 4½"h x 7¾"w x 1¾ "d, 1½ lb..... **$189.95**

**YACHT BOY 305**
Continuous SW coverage from 2.3 to 21.85MHz without gaps. Includes all existing SW bands plus FM-stereo, and Medium wave. 30 memory presets. Direct entry digital tuning, auto-scan and up or down slewing. Large cavity speaker enclosure for true rich sound. Requires 2-"C" batteries or external 110V AC adapter. 4"h x 7½ "w x 1½" d, less than 1 lb..... **$119.95**

**TRAVELLER II**
Covers AM/FM broadcast, the 19, 25, 31, 41, 49M SW bands (5.8-15.6MHz). Multi-function LCD display, pushbutton and slide controls, tuning indicator. Clock with travel alarm.and World Time selection switch – select a city and read the time! Requires 3 "AA" batteries (not included) Telescoping and built-in ferrite antenna. 2 speaker, jacks for earphones & external. AC adapter (not included). 5½ "w x 3½"h x 1¼"d **$69**

# PANASONIC

**RF-B45**
**Portable Receiver.** covers (LW) 144–288kHz (MW) 520–1610KHz, (SW) 1.62–29.99MH and (FM) 87.5–108MHz. Capable of SSB reception. Six Way multi-tuning system: 18 station preset memory, frequency direct access, meter band access, up/down manual tuning, memory search with signal strength and auto tuning. LCD display, quartz clock with sleep timer, high/low tone selector, DX/Local selector. Deluxe carrying case, ext. antenna wire for shortwave reception, hand strap and earphone included. Requires (4 "AA" batteries. 4¾ "h x 8½ "w x 1"d, 1.6 lbs ..... **$169**

# YAESU

**FRG-100B**
**High Performance Communication Receiver.** Covers 50KHz to 30MHz with CW, SSB, AM and optional FM modes 50 fully-tunable memory channels store frequency, mode and filter selection two additional memories provide band edge information used in scanning function. Multi-function scanning (memory, band selectable group, priority) with carrier or time-delay resume enables convenient searching for new stations, or scanning within a known band. Twin 12 and 24 hour programmable clocks with on/off-timer and sleep-timer. Yaesu CAT system for PC control. 9⅜"w x 3½"h x 9½"d, 6.6 lbs..... **$619**

**New! SONY ICF-SW40**
**Compact World Band Portable**
Covers SW/MW/LW. PLL synthesized provides easy 1 kHz-step digital tuning, with fine or normal switch. FM stereo with headphones. 20 memory presets, built-in clock/sleep timer. Uses 3 AA batteries. 6¾ "w x 4⅜"h x 1½ "d, 1½ lbs ..... **$139.95**

# ICOM

**R-8500**
**Super Wide Band • All Mode Communications Receiver**
Covers 0.1 to 2000MHz (cellular Blocked) in 10 Hz tuning steps. kHz to 30MHz, all modes. TV & Stereo FM is optional with TV-R7100. Dual VFOs and direct keyboard entry, thirty-two tunable multi-function memories. RIT, notch, selectable AGC, noise blanker, tone, squelch, recording jack. Selectivity: 500 Hz, 2.3 kHz, 6 kHz, 15 kHz. Optional wireless remote controller and voice synthesized readout board. 110/220V AC; Optional kit available for 12V DC. 11⅞"w x 4⅞"h x 10⅞"d, 16½ lbs..... SPECIAL **$1899.95**

**R-100-11**
**Mobile Desktop Scanner**
Covers 100kHz–799MHz and 900-1856MHz (cell blocked). AM, FM wide and narrow modes; Direct Keypad entry or selectable step knob tuning. 7 scanning. modes. 121 memories: 100 for frequency, mode, attenuator and preamplifier settings; 20 scan edge for ten pairs of ranges for programmed scan and one priority. Convenient 24-hour clock and timer. Telescoping antenna & three external antenna inputs. DC cord & mobile mount included. 13.8VDC @ 1A..... **$799.95**

**R-10-05**
**General Coverage Pocket Scanning Receiver** • Covers 500kHz–1300MHz (less cellular). AM, SSB, FM wide or FM narrow modes. Programmable tuning steps. On-screen spectrum display, 1000 non-volatile memory channels arranged in 18 banks of 50 channels. Scan by bank, mode, or program. Alpha-numeric characters can be entered to identify channels & banks. Noise blanker and automatic noise limiter., lock, sleep timer, auto frequency control (AFC) & more! Easy-to-read edge-lit LCD display, 24-hour clock with timer, adjustable LCD contrast, signal indicator, power-saver function. Uses Ni-Cd, alkaline or other DC source. Ni-Cds & AC wall charger incl. 2.3"w x 5.1"h x 1.2"d ..... **$499.95**

# DRAKE

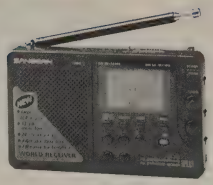
**SW-8**
**Communications Receiver** • Covers 100kHz–30MHz, 87–108MHz FM (stereo with headphones), and 116–136MHz Aircraft. 70 scannable memories. Standard & synchronous detection AM, selectable SSB reception on the Medium and Shortwave bands. Direct entry keypad, 0.5uV sensitivity, dual–6 or 4 kHz AM selectivity, 2.3kHz SSB selectivity. High contrast LCD readout; 100Hz tuning accuracy. Dual-mode clock timer. AC adapter supplied, or use optional batteries for portable operation. 11"w x 5¼"h x 11¾"d, 10 lbs ..... **$799.95**

**R-8A**
**Communications Receiver** • Covers 100kHz–30MHz + 33–55 & 108– 174 MHz with optional VHF converter. Alpha-numeric display, dual VFOs; 440 memories; multiple-function scanning; AM/FM/RTTY/CW/SSB modes; 4 voice bandwidth filters; switchable preamplifier & attenuator; dual noise blanker; IF shift & notch. S-meter; fluorescent display; dual time zone clock; dual timers, dual antenna connectors. Single button access to mode & bandwidth selection. RS-232 control capable. Optional interface software for MS-DOS computers. Universal power supply. 13½"w x 5¼"h x 13"d, 13 lbs..... **$1079.95**

**SW-1**
**Shortwave Receiver** • Covers 100kHz–30MHz. Synthesized microprocessor controlled tuning, 32 programmable memories. Easy tuning with Tuning Dial; Up/Down Buttons or Direct Keypad Entry. Dual antenna inputs for coaxial feedline or wire antenna. 12V or AC adapter supplied. 10⅞"w x 4⅜"h x 7⅜"d, 4.7 lbs ...SPECIAL **$269.95**

**SW-2**
**Shortwave Receiver** • Same as SW-1 except – SSB; Synchronous detection; 100 memories; larger display; Dimmer; Rear speaker jack. Improved sensitivity & selectivity, optional infrared remote control..... **$499.95**

# SANGEAN

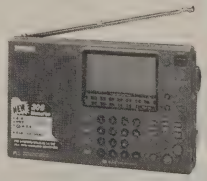


**ATS-202**
15 bands, covers 2.3 to 7.3 and 9.5 to 26.10MHz. AM, FM; stereo with headphones. MW 9k/10k switch. Manual and automatic station search, 20 station memory presets. Large backlit LCD display, clock with alarm and sleep timer features. Low battery indication. Requires (2)"AA" batteries or external 3V DC. 5¾"w x 3⅜"h x 1⅜"d, 8.7 oz..... **$89.95**

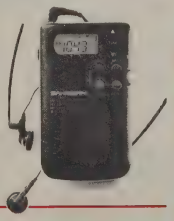
**ATS-303**
13 bands, covers 2.3 to 7.3 and 9.5 to 26.10MHz. AM, FM; FM stereo with headphones. MW 9k/10k switch. Selectable continuous tuning across frequency range and/or SW band. Time & frequency display, Auto or manual station search, 20 station memories. Large LCD display, tuning LED. Clock with radio or buzzer alarm & adjustable sleep timer. Low battery icon. Requires 4 "AA" batteries or ext. 6V DC. 6½"w x 4⅜"h x 1⅜"d,15 oz..... **$79.95**

**ATS-818CS** (left)
**World Band Receiver with Programmable Cassette Recorder**
16 bands, continuous coverage 50kHz–30MHz. AM/SSB/CW/FM; stereo via headphones, 45 memory presets. Tuning methods: Direct input, auto or manual scan, memory recall, rotary dial. AM wide/narrow filter, tone/RF gain controls, signal strength/battery indicator. Programmable cassette recorder, play/record LED indicator, auto-stop feature. Clock with dual time display, alarm/sleep timer. Uses 7 AA batteries. Includes AC adapter & ext. antenna adapter. 11½"w x 7¾"h x 2¾"d, 5 lbs ..... **$229.95**

**ATS-818** (right)
**World Band Receiver** • Has all of the features of the ATS-818CS above, but does not have the built-in cassette recorder feature..... **$179.95**



**ATS-909**
**FM-Stereo/MW/LW/SW PLL Synthesized Receiver** • 5 tuning methods: Direct Frequency, Autoscan, Manual, Memory Recall and Rotary, 307 memories. Stereo via earphones, SSB reception. MW 9k/10k switch. AM wide/narrow filter & FM mono/stereo selector. Dual time with 3 timers and sleep timer; clock displays 42 world city times. RF gain/tone controls. Lock switch, recorder output jacks, battery & signal strength indicator. Uses (4) "AA" batteries or 6V DC; AC adapter included. 8½"w x 5⅜"h x 1⅜"d, 1.9 lbs..... **$279.95**



**DT-200V**
**Broadcast & TV Band Receiver** • Fits in shirt pocket or clips to belt. Covers AM/FM broadcast bands (FM stereo via headphone), plus the audio portion of TV channels 2 to 13. LCD display, up/down tuning buttons, auto-scan, 19 memories, automatic shut-off, built-in speaker. Belt clip and stereo earphones included. Uses (2) AA batteries. 4⅜"h x 2⅜"w x ¾"d, 5 oz ..... **$69.95**

# MFJ

**MFJ-8100**
**Shortwave Regenerative Receiver**
RF stage for great sensitivity, goes into regeneration smoothly without pops or dead spots. Stations world-wide come in loud and clear with just a 10 ft. wire. Listen to international SW broadcasts, hams on SSB and CW, RTTY, packet & more!. Covers all or part of the 75 to 13M SW bands. Smooth Vernier drive reduction tuning. Rugged aluminum cabinet. Uses a 9V battery or ext. DC. Two jacks for Walkman-type earphones or plug-in speakers. 7"w x 2½"h x 6"d, 1 lb

**MFJ-8100K (kit) $59.95 • MFJ-8100W (wired) $72.95**

**MFJ-784B**
**Super DSP Filter**

Digital Signal Processing automatically eliminates hetrodynes, reduces noise and interference on SSB/CW/AM, all digital modes, VHF, EME & satellite. Tunable FIR linear phase filters minimize ringing, prevent data errors, and have up to 60dB attenuation–just 75Hz away! Tunable Spotting Tone™ automatically tunes the CW filter even in the narrowest bandwidth. MFJ's exclusive Adaptive Tuning™ center frequency tuning automatically becomes finer as you narrow the bandwidth making extremely narrow filters easy-to-use. Improved automatic notch with variable aggressiveness. 2 watt audio amplifier with AGC. 12V DC or 110VAC with MFJ-1315. 2½"h x 9"w x 6"d ....**$229.95**

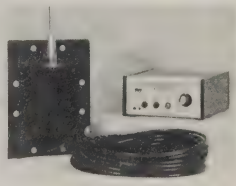
**MFJ-752C**
**SSB/CW Audio Filter** (left)
Pull out stations from noise & interference. Peak, notch, low or high pass control helps to eliminate hetrodynes & interference. Filters tune 300 to 3000Hz; bandwidth varies from 40 Hz to almost flat; notches to 70dB. Effective noise limiter. Switchable inputs for two radios. Use 9-18VDC or 110VAC with MFJ-1312. 10"w x 2"h x 6"d ..... **$89.95**

**MFJ-956**
**LW/MW/SW Preselector/Tuner** (right)
Improves the reception of signals from 150kHz–30MHz. Tuning boosts signals while rejecting images, intermodulation, and other phantom signals. 2"h x 3"w x 4"d..... **$39.95**

**MFJ-959B**
**Antenna Tuner & Preamplifier**

For 1.6 to 30MHz, provides a proper impedance match between antenna and receiver for best reception. Built-in 20dB preamplifier with gain control & 20dB attenuator. Select from two antenna inputs for two receivers. 9-18VDC or 110CVAC with adapter. 5"w x 2"h x 6"d ..... **$99.95**

**MFJ-1024**
**Outdoor Active Antenna**



Covers 50kHz–30MHz. The Amplifier Module with 54" whip mounts anywhere outside. Connection is made by the supplied 50' coaxial cable to the Control Unit, inside, which contains a gain control and 20dB attenuator to prevent receiver overload from the amplified signals. Switches select between two receivers and auxiliary antenna. LED "on" indicator. Auxiliary input and output jacks. 12VDC or 110VAC with MFJ-1312B adapter. Control: 6"w x 2"h x 5"d, Module: 3"h x 4"w x 4"d..... **$119.95**

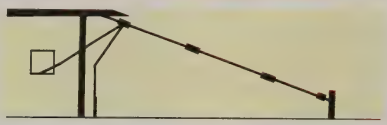
**MFJ-1020B**
**Indoor Active Antenna**

Covers 300kHz to 30MHz in five bands. Built-in 21 inch telescoping antenna provides maximum signal strength. Also functions as a preselector when using an external antenna. Minimizes intermodulation, improves selectivity & reduces noise. Tune, Band, Gain, On-Off/Bypass controls. Uses 9V battery, 9-18VDC or 110VAC with MFJ-1312 adapter. 5"w x 2"h x 6"d ..... **$69.95**

## ANTENNA SUPERMARKET

**EAVESDROPPER™ Shortwave Antennas**
(left) **Center-fed dipole** with an 8-trap configuration, provides reception of all shortwave bands, 11 to 90M. Includes Zap-Trapper® gas-tube lightning arrestor & 50 ft. support rope. Overall length is 42 ft., comes assembled. When ordering, specify with **100 ft. of 72Ω twin lead**, or **weatherproofed coaxial center connector** (coax not included)..... **$79.95**
(right) Coil loaded, **end-fed SWL sloper** configuration, with underslung parallel element. Covers AM broadcast, 120 and 90M, and all shortwave bands 7 to 13M. Overall 67 ft., comes fully assembled. Includes Zap-Trapper® lightning arrestor, coaxial connector, and 50 ft. of nylon rope..... **$79.95**

**ALPHA DELTA** COMMUNICATIONS, INC.



**DX-SWL** • Sloper Antenna, covers 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90 & 120 meter shortwave bands, plus the AM broadcast band. Sloper design provides outstanding reception of low-angle DX signals. Multi-band transmit capability with an antenna tuner, handles up to 2000 watts. Overall length is 60 ft, requires 50Ω coaxial cable . . **$79.95**

**DX-ULTRA** • Dipole, covers AM Broadcast through 30MHz. Efficient, low-noise, broadband performance for Medium Wave, Tropical, International SW, Military, Government, Embassy, Maritime, Aircraft, Commercial & Utility frequencies. Designed with inductors, parallel wire elements and a center insulator with a built-in static electricity Protector. Over all length is 80 ft. May be installed as a dipole, inverted-vee, or full sloper. It can be used with an antenna tuner as a transmit antenna up to 2kW. Connector accepts coaxial cable or balanced line. Assembled, ready to go!..... **$119.95**

## AMECO

**TPA Tunable Preamplifier & Active Antenna**
Covers 2 to 30 MHz in 5 bands. Use with an outside antenna as a tunable preamplifier with >20dB gain and low noise figure, or as an effective indoor active antenna using the built-in 30" collapsible whip. Requires 9 VDC or 110VAC with optional PT-9T AC adapter. 2½"h x 8"w x 6½"d.....**TPA $69.95**

**MFJ-462B**
**Multi-Reader**

Decode RTTY, ASCII, CW & AMTOR from Amateur, Commercial, Military, Weather, Aero & Marine. Plugs into phone jack; decodes & displays messages on a 16 character LCD display. 12VDC. 5½"w x 2½"h x 5½"d.....**$159.95**

See Price List for cables

Same Day Shipping–use your Credit Card

## PALOMAR

**LA-1 Loop Antenna**

Picks up less noise than other antennas. Six plug-in loops for various frequency ranges VLF to 15MHz, rotate and tilt to produce sharp nulls that cancel interference and noise. Built-in 20dB preamp compensates for size. 2¼"h x 7½"w h x 6"d..**$99.95**

**Plug-in Loops**

For 40–150kHz, 150 to 550KHz, 550 to 1600kHz, 1.6 to 5MHz or 5 to 15MHz ..... **each $99.95**

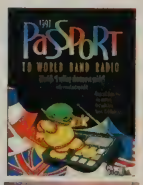
**VLF Converters**
Receives and converts the 10 to 500kHz Very Low Frequency band to 80 meters. Two models tune this low range on a general coverage receiver or ham band transceiver. Uses 9V battery. 2"h x 4¼"w x 5"d.
**VLF-A** Use with a Ham Band transceiver ..... **$89.95**
**VLF-S** Use with a General Coverage receiver **$89.95**

## BMI

**Nitelogger II**
**Automatic Tape Recorder Activator** • Takes audio from any 8Ω source and provides 600Ω match and voice activated relay operation for a recorder. Three connections: the radio's external speaker jack, the recorder's remote & microphone input jacks. This device can make a simple crossband repeater by connecting up two HT's. Built-in monitor speaker with volume, drop-out sensitivity & delay controls, record light. AC adapter supplied ..... **$69.95**
**RC-1A Impedance Matching Patch Cord** • Provides a proper impedance match between an 8Ω source and a 600Ω tape recorder input. Provides proper loading for the source device, an attenuator prevents recorder input overload. 3.5mm plugs ..... **$19.95**

## PERCON SPECTRUM CD

A frequency database with over 3 million records. Contains data for Police, Fire, Hospitals, Taxis, Businesses, State & Local Governments, Airlines, Hotels, Utilities, Theme Parks, Phone Companies & more. Requires: 386 processor or above, CGA, EGA, or VGA Video Display, 2 Meg Hard Disk, CDROM Drive, and a printer ..... **$29.95**




**1997 Passport to World Band Radio**
Shortwave listening guide containing data on every international broadcast station; names, locations, frequencies, operating times, coverage, target area, transmit power & more. Hourly guide for English language programs, worldwide. Test reports, buyer's guide.....ARR 249 **$19.95**

**MONITOR AMERICA**
Third edition, 1108 pages. A complete listing of public safety and business radio commuications of alomst every community in the nation. Includes maps, tone codes and repeater input and output frequencies. Listings of AM and FM radio stations with frequecies and formats. Race car teams, special sections of *Disney* and other aviation spots, much more.....**$29.95**

## AEA / TIMEWAVE TECHNOLOGY INC.

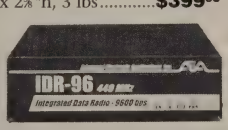
**PK-12** (right)
**Low cost, 1200 bps, VHF/UHF, packet TNC**
Ideal for getting started in Digital Communications. 1200 bps, VHF Packet ready; Gateway as a Node; PC PakRatt Lite™ Control software included; APRS™ software included; APRS Adapter Cable available; AEA Host mode; Advanced command set; Identify TCP/IP, TheNet & NetRom; GPS firmware & commands; Stand alone tracking; External TX adjustment. Perfect for base station and full of features for mobile. Energy efficient – 12V DC, or can operate on a 9V battery. 5¾"w x 5¼"d x 1⅜"h, 12 oz ..**$99.95**

**PK-96** (left)
**9600/1200 bps packet TNC**
A plug-in and go TNC, loaded with features. 9600/1220 bps Packet Ready; GPS firmware standard; Remotely programmable GPS commands; Stand Alone Tracking; Hardware HDLC for accuracy; True DCD to hear weak signals; Gateway as a Node; TheNet X-1J Node firmware option available; Full MailDrop facility; PC PackRatt Lite™ terminal control software & APRS™ software included; AEA Host mode; Advanced command set; Identify TCP/IP, TheNet & NetRom; Separate external TX for 9600/1200 bps adjustments; External reset. Windows™ and Macintosh™ program available. Requires 12V DC. 6¼"w x 7½ "d x 1⅜ "h, 1¼ lbs. Available with 32K RAM (18K Mailbox)....**$169.95** or 128K RAM (100K) ..... **$199.95**

**DSP-232**
**Dual Switchable Port DSP Multi-mode Controller**

Designed around a high-speed Digital Signal Processor (DSP) to provide the ultimate in signal filtering, modem performance, and flexibility. *Features:* 9600 & 1200 bps packet; All standard HF & VHF modes; Mailbox expandable to 242K; Full MailDrop facility for Packet, PACTOR, and AMTOR; Two switchable radio ports with AFSK and 9600 adjustments; GPS firmware compatible with GPS, Loran, ARNAV, and ULTIMETER II weather stations; Gateway firmware works as a node for faster throughput; SAIM™ signal I.D.; Hardware Memory ARQ; Identify TCP/IP, The Net & NetROM; More! 12V DC. 9¼"w x 7⅞"d x 2⅜"h, 3 lbs.....**$399.95**

**IDR-96**
**Integrated 440MHz, 9600 bps Data Radio**

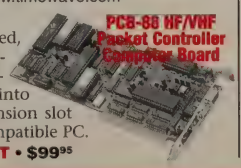



PK-96 TNC technology and a 5W, crystal controlled radio operating on 441.05MHz. Simple operation, no tuning! Full featured mailbox; Gateway node operation; advanced GPS; Identification of TCP/IP, TheNet; and NetROM stations; and more! PC PakRatt Lite™ & APRS™ software. 12VDC .....**$449.95**

**DM-1**
**Deviation Meter**
Measure FM transmitter deviation on 144, 220, or 440MHz. Battery powered, crystal controlled, no tuning . Two ranges allow accurate measurement of voice, data, DTMF, and sub-audible deviation on a 10-segment LED bar display. Includes outputs for an external digital or analog meter, and audio. 6⅜" x 4¾"d x 1⅞"h, 1 lb .. **$169.95**

http://www.timewave.com

**PCB-88** A full-featured, 1200 bbs, IBM compatible, HF/VHF packet controller. Plug it into any 8 or 16-bit expansion slot in your XT, AT or compatible PC.




**CLOSEOUT • $99.95**

## HAL COMMUNICATIONS CORP.

**P38 MULTIMODE HF MODEM**
A full-size 13½" DSP card for all AT compatible PC's. Provides the best all-around performance on CLOVER, PACTOR, AMTOR and RTTY. Does not require the use of Comm ports or IRQ's. Operating software for your PC is included. Latest updates are available through the HAL Techline and the Internet. Third party software, such as EXPRESS, RAGCHEW, .WF1B is available. One-year warranty ..... **$349.95**

**HAL TECHLINE:** 217-367-5547
http://www.halcomm.com

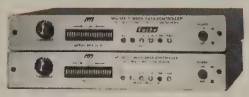
## Kantronics

**Packet Controllers**
**Amateur Paging**
**Multi-Mode Controllers**
See the Price List & Page 38

**Kantronics G-TOR™ BOOK**
**The New Mode** A valuable collection of previously-published articles, a detailed description of the G-TOR protocol and numerous informational numerous charts. Written primary by the Kantronics staff of Phil Anderson, WØXI, Karl Medcalf, WK5M & others. 90 pages ..... **$19.95**

http://www.kantronics.com

## MFJ Packet



**MFJ-1278B**
**Multi-mode Data Controller** 10 modes: PACTOR, 16-level FAX, Color, SSTV, PACKET, AMTOR, RTTY, ASCII, CW Navtex & Memory Keyer. Enhanced Mailbox, 32K RAM, 16-gray level modem, 20 LED tune indicator, Auto Signal Analysis, MARS mode, sidetone amplifier, internal modem header, 10 user programmable message buffers, packet connect bell, dual radio ports, "Has Mail" LED, KISS interface, Host mode, Threshold control, RS-232 and TTL ports. 12 VDC, AC adapter 9½" x 9½" x 1½" .. **$269.95**

**MFJ-780** DSP Board ..... **$89.95**

**MFJ-1278BT** Same as MFJ-1278B except Turbo version, includes a 2400 baud modem ..... **$329.95**

**MFJ-1278B/DSP** MFJ-1278B w/DSP filter..**$349.95**

**MFJ-1272B/M** TNC/MIC Switches. Push button for voice or digital. Specify radio and TNC connection.....**$39.95**

**MFJ-8621**
**2 meter Packet-only Data Radio**
High-performance through 9600 baud. Plug in the TNC cable*, your antenna and power – you're ready for packet. Crystal controlled on 145.01 MHz 5W output, requires 12 VDC @ 1 Amp. 5"w x 5½"d x 1½"h ..... **$109.95**

**MFJ-8631**
**220MHz Packet-only Data Radio**
Same a functions as MFJ- 8621, but 223.700MHz and 3W output.**$129.95**

**APRS/MFJ-8621X1**
**Dedicated VHF Data Radio for APRS**
Automatic Packet Reporting System transceiver (145.79 MHz) ..... **$129.95**

**MFJ-1270C**
**TAPR TNC-2 Clone** Interfaces computer with RS-232 serial port and terminal program for VHF/UHF, OSCAR and other non-FM packet. Switchable HF/VHF modems. EasyMail™ personal mailbox, WeFAX. KISS interface for TCP/IP, 256K EPROM & 32K RAM. TTL serial port, battery back-up. AX.25/Level 2-V2 software, hdwe HDLC–full duplex, true data carrier detect for HF, multiple connects. interface cable, serial port connector & AC adapter.12 VDC. 9½" x 7½" x 1½" ..... **$109.95**

**MFJ-1270CQ**
TAPR TNC-2 Clone 9600 baud TNC ..... **$199.95**

**MFJ-2400**
2400 bps packet modem for MFJ TNCs..... **$29.95**

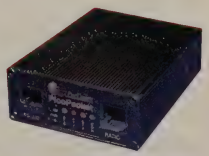
**MFJ-9600B**
9600 bps packet modem for MFJ TNCs ..... **$99.95**

**MFJ-781 DSP for all TNCs!**
Separate unit gives your TNC (Kantronics, etc) Digital Signal Processing power.....**$119.95**

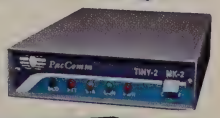
See Price list for pre-wired 8621-to-TNC cables.
Crystals for other packet channels may be ordered from MFJ by calling 1-800-647-1800.

## PacComm Packet Radio Systems, Inc

**Pico Packet Miniature TNC**
Very small, 32K or 128K RAM. A second serial port for external GPS may be added. Terminal programs included. Available with internal GRPS receiver. Optional Ni-cad battery packs. This would make a good portable or automatic unattended tracking TNC because it can be independent of power souces. With 32K RAM...**$135.95** • With 128k RAM .....**$149.95**



**Tiny-2MK-2 Multi-purpose TNC**
Basic TNC. TNC-2 compatible. Disconnect header (will accept any TNC compatible modem, MFJ-9600, etc). RS-232 and TTL ports. Low power consumption, draws only 45ma .....**$149.95**




**Tiny-2MK-2/GPS Tracker**
Basically a Tiny-2 with a built-in GPS unit. Supplied with a small magmount Trimble GPS antenna .....**$629.95**

**Spirit-2 High Performance Packet Controller**
Designed to be configurable by setting jumpers and installing optional logic devices to support various tasks without performance compromise...**$239.95**

# Kantronics

## Digital Summer.....New Packet Units!

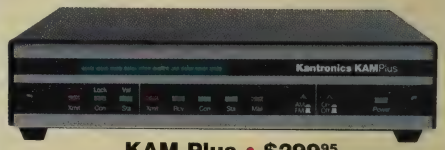
**PACKET:** The **KPC-3 Plus** and **KPC-9612 Plus**, new for 1997, replace the "industry standard" KPC-3 & KPC-9612. These newly designed units retain the features of their predecessors and add new modes, firmware, and hardware: both include a Motorola HC11 processor, digital pots for keyboard adjustable radio drive, two A/D inputs for data gathering, two control line outputs, and a substantially expanded manual - including 40 + pages of "operational" information on packet, personal mailboxes, the national BBS system, GPS interfacing, WEFAX reception, and more. Both add copy capability for the Emergency Manager's Weather Information Network **(EMWIN)** – a 24 hour VHF broadcast of weather information (supported by FEMA and the NWS) - and expanded **APRS** operations (repeater and telemetry beacon).

*New!* **KPC-3 Plus/128 • $139.95**

As with most Kantronics TNCs, the **KPC-3 Plus** and **KPC-9612 Plus** support these "standard" modes of operation: "new user," terminal, HOST, GPS, BBS, KISS, extended KISS, and KA-Node. K-Net networking eproms are optional. The KPC-3 Plus has a 1200 baud radio port, and the KPC-9612 Plus features a 1200 radio port and a high speed port (4,800, 9,600, 19K2, and 38K4 baud; software selectable). The higher speeds are included in anticipation of the availability of higher speed radios in the near future for 440 MHz - six 100 Khz channels are set aside for packet near 430.55MHz. The 9612 Plus also supports **amateur paging** - transmission and copy - via port 2.

*New!* **KPC-9612 Plus/128 • $289.95**

**HF DIGITAL:** The **KAM Plus** just got a make-over. It now features a clam-shell metal case and front cover, with colors matching the KPC-3 Plus and KPC-9612 Plus TNC modems. All popular HF digital modes are supported (version 8 firmware): AMTOR, Pactor, G-TOR, RTTY, CW, GPS (NEMA-0183 interfacing), and packet. Port 2 supports 1200 baud packet and may be operation at the same time an HF mode is running in port 1, providing true dual-port operation - a unique feature of the KAM Plus. This HF workhorse is supported by HostMaster II+ (DOS based software) and many third-party programs.




**KAM Plus • $299.95**

rfconcepts™ a division of Kantronics Co., Inc.

**VHF/UHF AMPS:** The 150 watt 2-meter Max-Amps, new for 1997, compliment Kantronics' Rf concepts line of VHF and UHF amplifiers: the Mini-Amp 144P, the Mini-Amp-440P, and the dual-bander, the RFC 2/70G. The Max-Amp 10 (10 watts in for 150 watts out) and the Max-Amp 45 (45 in for 150 out) replace the RFC 2-217 and RFC 2-317 respectively. These new designs feature directional coupler keying, thermal & SWR protection, a new heat sink, and 15 dB gain receive preamps.

*New!* **Max-Amp 45 • 289.95**

*More Amplifiers – See the Price List*

**The Leader in:**

- **Packet Controllers**
- **Amateur Paging**
- **Multi-Mode Controllers**
- **RF Amplifiers**

Kantronics
1202 E. 23rd Street, Lawrence, KS 66046
tel: 913-842-7745 • fax 913-842-2031
E-mail: sales@kantronics.com
web: www.kantronics.com

NOISE KILLER

# TIMEWAVE TECHNOLOGY INC.

DSP FILTERS

## All-Mode DSP Noise Filters

**Timewave DSP-599zx and DSP-59Y are used with more DSP Transceivers than any other DSP filter.** (See customer comments at Timewave web site.

Review in QST Magazine December 1996, World Radio and TV Handbook 1997 (DSP-599ZX vs. NIR-12), Radio Communications February 1997 (Australia), Radio-Horen March 1997 (Germany) see web site for more listings. http://www.timewave.com

### "The most powerful Noise and QRM filter in Amateur Radio"

**DSP-599zx** – the latest generation DSP filter, incorporating a High-speed CPU running at 36.8 Million Instructions per second. A new backlit, 2 x 16 alphanumeric display is used for Visible Memories™ feature to eliminate guessing which filter settings are selected, and provides instant recall of all filters.

The filter comes with preset filters for data and includes 5 for RTTY, SITOR, AMTOR, PACTOR, G-TOR, HF Packet, Weather Fax, Slow Scan TV, Clover and 3 User Definable filters. Timewave filters process in Real Time, a feature that reduces listener stress during noisy band conditions. And, you can leave the random noise reduction feature ON when tuning In a station because the time delay is not noticeable like other filters.

A special RS-232 port allows the filter to be used as a RTTY Modem with software and a computer. In this mode, the filter has a tuning bar and a special Double Notch Filter that gives the RTTY user a 5-7 dB Signal to Noise Ratio improvement over a regular DSP filter, heterodynes that disappear faster and weak signals that "pop up" from the noise.

The Continuous Tuning Filter can open up to 5kHz for Shortwave AM broadcast & VHF/UHF FM. In Voice Mode, the Heterodyne Eliminator has a user-selectable Automatic Notch, a Manual Dual Notch and a Manual Single Notch. The Low Pass Filter covers 200 to 1000 Hz and the High Pass Filter from 1000 to 5000 Hz. Each individual filter is tunable and does not have any interaction with the other.

In CW mode, the filter has Variable Center Frequencies to match any radio and is the only one to incorporate CW Pitch Shift Conversion. This allows the operator to take a high sidetone and convert it to any tone between 200 and 800Hz. Many older transmitters and transceivers have sidetones which can not be changed or reprogrammed. Their high sidetones can be converted to a low tone and still let the operator zero beat another signal without changing the BFO or other controls.

A Test Equipment Mode features a Two-tone Generator for SSB; 20Hz to 10kHz Audio Sine Generator; Audio Millivolt Meter and a CTCSS Encoder & Decoder for all PL Tones from 67.0 to 254.1 Hz. It's accurate enough for maintaining radio equipment and for use at repeater sites to check tones, etc. In addition, a CTCSS squelch feature allows keying a tape recorder or other device.

Timewave is the only manufacturer of Amateur Radio DSP noise filters to use the more expensive 16 bit A/D D/A converter with a high audio bandwidth. This makes the filter quieter than the competition and gives much superior audio reproduction. Also incorporated is the latest surface mount technology using a four layer board to improve quietness and reliability. Meets both the FCC Class-B and strict European Common Market standards. 12V DC @ 1A 7½"w x 8"d x 1¾"h, 2.2 lbs.....**$369.95**

- **Visible Memory™ • Calibrated Filters™**
- **Instant Recall • Hyperspeed 27ns, 36.8 MIPS**
- **Wide filtering for Shortwave & VHF/UHF FM**
- **Narrow for CW/SSB • Demodulates RTTY**
- **Up 20dB White Noise Reduction**
- **Front Panel Programming**
- **Two selectable radio inputs**
- **Programmable input sensitivity & Line output**
- **Selectable Memory Mode on power up**
- **Real Time Listening • AGC**
- **Variable Noise Aggressiveness**
- **Dual Audio Channels • Headphone level**
- **CW Marker Tone for zero beat**
- **Backlit LCD Display**
- **Extra code space on 2 Mb EEPROM**
- **Field Upgradable Software**

**DSP-59 Plus** Version 3.0 Features 225 combinations of High & Lowpass Filters for Voice and all Special Modes. Over 300 CW & DATA filters (25 to 600Hz), allow selection of almost any filter needed for all modes, including RTTY, SSTV, AMTOR, G-TOR®, PACTOR, Packet, Satellite, EME, SSB, CW, Weather Fax & AM

Remodulator for RTTY for perfect copy of signals below the noise. Voice Filters from 200 Hz (high-pass). 13 CW center frequencies from 400 to 1.0 kHz. AGC, HP/LP/BP, Heterodyne Elimination & Random Noise Reduction. 50 dB Notch kills heterodynes. Dramatic Random Noise Reduction from static, lightning, white noise, line noise, etc.

Marker spots the narrow CW filter, audio generator & self-test mode. Audio bypasses directly to station speaker with pushbutton or when power is off. Meets both the FCC Class-B and strict European Common Market standards.12VDC @ 1A. 7½"w x 8"d x 1¾"h, 2.2 lbs.....**$259.95**

**DSP-9 Plus** Version 3.0 SSB/CW Meets both FCC Class-B & European Common Market standards. 12VDC @ 1A. 6"w x 6"d x 1¾"h, 2.2 lbs.....**$199.95**

## All-Mode DSP Noise Filter for YAESU

**DSP-59Y Plug in Module** Fits in the phone patch slot of a YAESU® SP-5 or SP-6 external speaker. It uses the existing A/B switch and phone jack and retains use of the analog filters.

The module gives the YAESU FT-1000, FT-1000D, FT-990, FT-890, FT-900 & FRG-100 the latest Noise Reduction and DSP filtering technology. It can also be used with other radios and transceivers.

The DSP-59Y has many of the features of the DSP-599zx described to the left. It's Field Upgradable, has an LCD display for Visible Memories™ and Calibrated Filters™. The CW Filters range from 10 to 600 Hz with CW Pitch Shift and the Voice Filter ranges up to 5 kHz wide for SSB, FM & AM.

It features the new Hyper-Speed DSP Processor operating at 36.8 MIPS (the fastest) with 80KB of RAM on the CPU. A/B switch for Selectable Input Channels and the Analog Filters that are already part of the YAESU® speaker. This gives the operator maximum flexibility of both sets of filters and they can be used at the same time.

It also has Automatic & Manual Notch Filters. The manual notch can be used in the CW mode. Variable Noise Aggressiveness. Meets both the FCC Class-B and European Common Market standards. 12VDC @ 1A. 12"d x 3¼"h x 2¼"w, 2 lbs.....**$379.95**

- **Easy installation inside SP-5/6 speakers**
- **Increases Equipment Value & Performance**
- **Hyperspeed DSP (27ns)**
- **36.8 Million Instructions per Second**
- **80 Kb RAM on DSP Chip • 2 Mb EEPROM**
- **LCD Alphanumeric Display**
- **Visible Memories™ - Instant recall**
- **Software controlled front panel**
- **Preset Voice, DATA and CW filters**
- **Programmable filters • Demodulates RTTY**
- **RTTY Wideband for AM and FM**
- **Shortwave listening to 5kHZ**
- **Programmable line output level**
- **Field Upgradable software**
- **Extra Code Space for adding new software**

### Timewave is the leader in Amateur Radio DSP technology!

***Timewave Advanced DSP Filters allow an economical upgrade of your existing radios to new Higher Performance standards.***

***Timewave was the first to simultaneously Reduce Random Noise, Eliminate Heterodynes and provide Razor Sharp Audio filters. TW precision DSP filters are a must for today's poor signal conditions and crowded bands.***

***Timewave's technology leading filters are preferred by DX'ers & Contesters world wide.***

**information, inquiries & customer service:**

E-Mail: dsp@timewave.com

www: http://www.timewave.com

## NYE VIKING

**MB-V-A** 1.8–30MHz continuous tuning. Heavy duty silver plated variable inductor with 25:1 vernier dial. 7kV variable capacitor and 15kV switch selected fixed output capacitors. Tunes most antennas 1/4-wave length or longer from 40–2000Ω but some antennas may not tune at 1.8 MHz. Automatic SWR metering without reset or calibration. Separate automatically switched 300W/3KW RMS wattmeter. Precision 2½" backlit meters display SWR and Power, continuously. Rugged, silver plated 5-position pushbutton antenna switch selects 4 antennas: 2 coaxial, single wire and balanced line, and bypass. Trifilar-wound 3KW toroid balun provides balanced output from 200 to 1000Ω, and unbalanced output down to 20Ω. Requires 9V battery for meter and external 12VDC for meter lights. 14¾"w x 6¾"h x 12¼"d, 18 lbs..... **$879.95**

**MB-V-B** same specifications as MB-V-A, except no Power or SWR metering capability ..... **$760.95**

**NYE Low Pass Filter** Installs between transmitter output and antenna. Eliminates Television Interference caused by harmonics from 1.8–30MHz transmitters. Rated at 2KW, 5KW SSB peak. Flat, low loss passband and stopband for over 65dB attenuation above 57MHz. SO-239 connectors, both ends..... **020-001 $56.95**

## ASTATIC Microphones

**D-104L** (center) The original "super talk power" microphone, a favorite of hams for decades! High output and 300-7500Hz response with rising characteristics between 500 and 4000 Hz, provides maximum intelligibility. Shock proof cartridge with high impedance crystal element, metal sealed for protection. Solid machined brass parts, heavy mesh grille, all heavy chrome plated. 3" dia. x 1⅜"d, 14 oz. Requires T-UG9 stand ..... **$39.95**

**10DA-L** (left) High-Z dynamic SSB microphone. Controlled 300–3000 Hz response provides high attenuation of the unwanted sideband & better copy through interference. 2⅞"w x 2⅛"h x 3⅛"d, 17 oz. Black, uses T-UG9 stand..... **$49.95**

**T-UG9** (right) Accepts the D-104-L or 10DA-L microphone heads. Built-in adjustable preamplifier with an output impedance that matches most transmitters. Side switch bar for PTT with slide-up clamp for locking down. Height is 8½" without head, base is 5½"dia. Chrome neck, grey base, 6-wire coiled cable. Requires 9V battery ..... **$49.95**

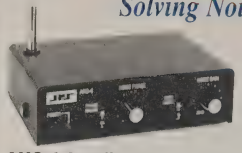
## SHURE

Series II SUPER PUNCH®

**526T** A dynamic microphone with a built-in solid-state preamplifier and adjustable volume control. Works into 500 to 5000Ω inputs, allowing it to replace most ceramic or dynamic original equipment microphones. The tailored 200 to 6000Hz frequency response provides very effective audio. Convenient momentary or locking push-to-talk bar operation. Comes with a coiled 5-conductor cord and wiring guide. Requires connector and 9V battery. 2 lbs, 11 oz..... **$112.95**

## JPS Communications, Inc.

### *Solving Noise Problems with Digital Signal Processing!*



### Antenna Noise Canceller

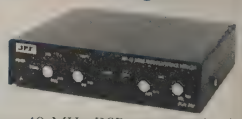
**ANC-4** Installs between the antenna and receiver. Usable between 100 kHz and 80 MHz. Eliminates local POWER LINE noise before it enters the receiver to let you hear signals you didn't know were there. Two front panel adjustments, PHASE and GAIN, reduces locally-generated noise typically by 50 dB. Short whip and wire noise pick-up antennas supplied with each unit. Rear panel connector for external noise probe. Automatic transmit switch over, handles up to 250 watts, has internally selectable delay time. Europe CE certified. 12V DC @ 300 mA. 1¾"h x 6"w x 4⅜"d, 2 lbs..... **$189.95**

### Noise Reducer & Filter Unit

**NRF-7** Provides several functions that improve reception for Amateurs and SWLs. Reduces or eliminates atmospheric (white & pink) noise and multiple heterodynes. No-delay filters for AMTOR, PACTOR and break-in CW Sharp, non-ringing CW and voice filters, plus auto NOTCH filter and white noise reduction. Installs between receiver output and station speaker, built-in audio amplifier. 12VDC. 1¾"h x 6½"w x 5"d, 2 lbs..... **CLOSEOUT $169.95**

**Power Pack** 115V AC adapter for JPS units....**$16.95**

### Noise/ Interference Reducer & Filter Unit



**NIR-12** Features two 40 MHz DSPs to provide the most powerful and advanced DSP Noise Reduction Unit available. Unparalleled performance, super-selective FIR filters, fully adjustable filter center frequency and bandwidth (3400 Hz to 50 Hz); both Dynamic Peaking AND Spectral Subtraction Noise Reduction; spectral multi-tone NOTCH filter. All modes and functions may be used simultaneously. Use on all operating modes, including AMTOR & PACTOR. Easily installed between the receiver audio output and the external speaker. Europe CE certified. 12V DC @ 1A. 1¾"h x 6½"w x 7¾"d, 4 lbs..... **$349.95**

**SDK-12** Software Development Kit The interface module and software disk to allow programming of the NIR-12 DSP chips via the serial data bus on your personal computer ..... **$35.95**

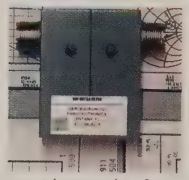
## DCI Bandpass Filters

**Clear reception! This filter Installs between your 2m rig & antenna to reduce the strength of out-of-band interfering signals while allowing the signals you want to hear pass through at full strength.**

- Eliminate the random squeals, squawks, beeps and strange voices from your VHF radio caused by Intermod from strong, nearby pagers, police radio systems, taxis, etc.).
- Hear the signals you want to hear even in crowded urban centers with high-powered commercial systems.
- Design: (2M/220MHz) four helical resonators with aperture coupling, (440MHz) four 1/4-wave linear resonators with aperture coupling
- Accepts 200 watts of power • Reduces spurious transmitter emissions. • VSWR 1.5:1
- Made of extruded aluminum, copper and brass. 12w" x 3"h 5"d, 2 lb, 11oz • Totally passive, does not need DC power
- **2M model** – Passband: 144–148 MHz, loss <1 dB
  Selectivity: –57dB at 136MHz & –43dB @ 156 MHz
- **220MHz model** – Passband: 222–225MHz, loss 1 dB, typical. Selectivity: –33dB at 233 3MHz & –28dB at 233 MHz
- **440MHz model** – Passband: 440-450MHz, loss 1 dB, typical. Selectivity: –47dB at 425MHz & –50dB at 456 MHz

**DCI 146-4H** 2m, SO-239 silver teflon..... **$89.95**
**DCI 223.5-3H** 220MHz, SO-239 silv. tef.. **$89.95**
**DCI 445-10C** 440MHz, "N" silv. tef-gold **$109.95**

## PAR ELECTRONICS Notch Filters



Solve most intermod or front end overload problems from paging systems with these small, asymmetrical, 45 to 54dB Notch Filters. The design is centered on the offending pager spectrum of 152 to 153 MHz and works effectively with an Insertion loss of typically 0.5 dB or less and a V.S.W.R of 1.25:1. Works well with dual-band (2m/70cm) transceivers providing low-loss pass-thru of 70cm signals.

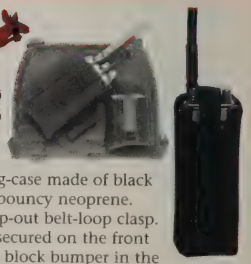
**VHFDN152** 2m base or mobile intermod filter, SO-239 connectors, 50W. 2" x 1" x 2¼"..... **$62.95**
**VHFDN152HT** 2m Intermod filter for handhelds BNC connectors, 20W. 1½" x ¾" x 2" .....**$68.95**

## New DRAKE TR270 FM Tranceiver

**$1399.95**

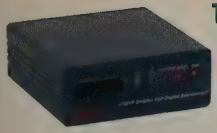
Features total integration of FM voice, packet, satellite, as well as weather fax and ACARS data reception. Actually two radios! – a full two meter transceiver (142-150MHz), a wide band receiver (136-174MHz) plus independent dual band (420-470MHz) reception. In satellite mode, both sections work together to provide mode-J operation. Options for 1200/9600 baud fax/data operation. 1/10/25W output, built-in ps.

## THE POUCH



Protective carrying-case made of black nylon bonded to bouncy neoprene. Quick release, snap-out belt-loop clasp. Restraining-strap secured on the front with velcro. Foam block bumper in the bottom can be easily removed to accomodate larger batteries. Convenient Chest Pouches also available. **See POUCH the Price List**

# TELEPHONE INTERCONNECTS



**CES WIRELESS TECHNOLOGIES**

## 4700VP Telephone Interconnect

- The Most Versatile Simplex or Half Duplex Patch
- True DTMF Regeneration
- 25 Speed Dial Locations • CW-ID
- Full Remote "Over-the-Air" Programming • Local programming
- VERATEC Smart Sampling VOX enhanced Protocol or Simple VOX Control
- Automatic Setup
- Automatic Last Number Redial
- User Programmable ID Code
- Comprehensive Toll Restrict with Override Code • Hook Flash
- Call Limit Timer • Courtesy Beep
- Time Out Timer/Warning Beeps
- Reverse Patch Ring • Repeat Audio
- Busy Channel Inhibit
- CTCSS Logic Input
- Lightning Protection
- Connect/Disconnect Control
- Tone Dialing/Multi-Country Pulse Dialing
- Extremely Compact and Rugged Construction (1.5 x 4 x 4 inches)
- **$169.95**

**CES SDI-50 Automatic Simplex Interconnect** Gives telephone phone access to handhelds and mobiles. Remotely programmable from any touch phone. Allows telephone-to-mobile signaling for selective calling. Converts base stations to a remote station accessible from any telephone. VOX-enhanced sampling. automatic CW ID. AC adapter & cables. 14¼"w x 8¾"d x 11⅝"h, 3¾ lbs..... **$449.95**

## GROTHE Sirens & Horns

**VS-2 Emergency Vehicle Siren** Designed for the Volunteer Fireman, a quality built wail-yelp alarm that delivers big sound performance – a whopping 120Dba sound level at 4 ft. Frequency range, 600 to 1200Hz. Pre-wired with a 3-position switch (Yelp-Off-Wail), high efficiency waterproof horn speaker, 10 ft. cable, mounting bracket/hardware. 12VDC @ 1.5A, 2.7 lbs..... **$89.95**

**VS-3 Vehicle P/A and AirHorn with Rebroadcast** A big, powerful airhorn sound with four different sounds (no siren) really calls attention to your vehicle. Delivers 120 Dba at 4 ft. By locking down the microphone with the supplied rubber band, you can monitor sound from a mobile rig, scanner or radio via the speaker outside. Includes horn speaker, microphone, electronic center, 10 ft. cable, mounting bracket and hardware. 12 VDC @ 1.5A..... **$129.95**

**VS-4 P/A Emergency Vehicle Siren** Contains P/A, Rebroadcast, Wail, Yelp, Pulse, Airhorn and P/A Override features, plus volume control of all siren modes. Restricts output when operating in people places. Includes horn speaker, microphone, 3" x 3½" x 2" electronic center , 10 ft. cable, mounting bracket and hardware. 12V DC @ 1.5A..... **$139.95**

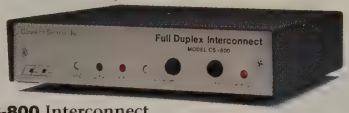
**Siren–Light Combo** A one-unit siren/yelp alarm, revolving halogen or strobe light and window mount. Fits all cars, slides on top of the car window and plugs into cigarette lighter outlet. The power plug contains as an "on" LED and three position switch to select yelp, off or wail. 12 VDC @ 5A.

**VS-2L Halogen** amber, blue or red **$249.95**
**VS-2LS Strobe** amber, blue or red **$299.95**

**CSI® CONNECT SYSTEMS INC.**

**CSI interconnects provide a fully automatic interface between your FM base radio and phone line so that you can initiate and receive phone calls in your mobile or on your HT without assistance.**

**The CS-800 & CS-900 below each contains powerful microprocessor controlled features such as • 90 Memory Speed Dialer • Last Number Redial • Built-in Programming Keyboard and Digital readout • Remote Base Mode • Regenerated Tone or Pulse Dialout • CW ID • Toll Restrict numbers and sequences... and More!**




**CS-800 Interconnect** Operates Full or Semi duplex and also has a built-in Repeater Controller. Simply connects to transceiver mic and speaker jacks. FCC & DOC approved .12-15 VDC. 7.9"w x 7.5"d x 2"h, 2.5 lbs..... **$359.95**

**CS-900 Interconnect** A simplex interconnect for use with any simplex transceiver. Can also be used through remotely located repeaters (from your base) for additional range. Digital voice delay is standard. Connects to microphone & speaker jacks of a simplex transceiver. FCC & DOC approved. (Transceiver switching speed does not affect performance). 12-15 VDC. 7.9"w x 7.5"d x 2"h, 2.5 lbs ..... **$359.95**

**CD-2 Communications Decoder Unit** When mobile, the CSI CD-2 will make iit easy for you to use open repeaters and autopatches because it decodes and displays any CTCSS, DCS or DTMF codes other amateurs are using on the channel. When at the base, the RS-232 port exports all decoded CTCSS/DCS or DTMF data to your PC allowing use of CD-2P software. Maintains a history of CTCSS/DCS/DTMF data from the CD-2 occurring on the channel being monitored, creates usage graphs, etc. PC/DOS based. 12-15 VDC. 4.9"w x 4.5"d x 1.9"h, 1 lb ..... **$249.95**

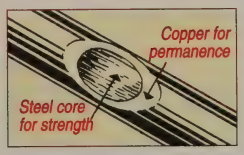
**CD-2P** PC Program for CD-2..... **$99.95**

**For additional information you may contact CSI direct:**
**Phone:** 805-642-7184 • **Fax:** 805-642-7271
**e-mail:** sales@connectsystems.com
**WWW:** http://www.connectsystems.com

**CASTLE RIDGE PRODUCTS, INC**

**COPPERWELD® Antenna Wire**

**FORGE-WELDED makes the two metals inseparable!**




**Solid bare copper-over-steel wire – Best for antennas!** Very strong, steel core has very little stretch and long service life. Copper covering provides low RF resistance, easy to solder. Choice of 12, 14 or 18 gauge, 100, 150, 250, 500 or 1000 ft. rolls.

| | | | | | |
|---|---|---|---|---|---|
| AN-122 | 100 ft. #12 | $24.95 | AN-143 | 150 ft. #14 | $24.95 |
| AN-123 | 150 ft. #12 | 29.95 | AN-144 | 250 ft. #14 | 32.95 |
| AN-124 | 250 ft. #12 | 49.95 | AN-146 | 500 ft. #14 | 56.95 |
| AN-126 | 500 ft. #12 | 84.95 | AN-148 | 1000 ft. #14 | 99.95 |
| AN-128 | 1000 ft. #12 | 139.95 | AN-181 | 250 ft. #18 | 14.95 |
| AN-142 | 100 ft. #14 | 19.95 | AN-182 | 500 ft. #18 | 24.95 |

# W5YI/WEST

## STUDY GUIDES

**TECHNICIAN NO CODE PLUS STUDY GUIDE** *by Gordon West, WB6NOA* Anxious to get on the air? Here's everything you need to become a Ham – quick & easy without the Morse code test! New 3rd edition, by Gordon West, WB6NOA covers the newest exam questions of July 1, 1997 to June 30, 2001. Fully illustrated textbook includes all possible questions, multiple choices & answers..**GWTM $12.95**

**OTHER TEST STUDY MANUALS** *by Gordon West, WB6NOA*

**GWGM** General Class Study Manual .... **$9.95**
**GWAM** Advanced Class Study Manual... **$11.95**
**GWEM** Extra Class Study Manual ..... **$11.95**

## VIDEO

**NO CODE VIDEO LICENSING SEMINAR**
**NCVS** Covers everything from antennas and feedlines to rules and regulations. Ideal for instructors and students and full of information everyone can use. 88 minutes..... **$21.95**

## TAPES

**THEORY TAPES** by Gordon West, *WB6NOA*

**GWNW** Novice Written Theory, 2 tape set..... **$9.95**
**GWTW** Tech Written Theory, 2 tape set ..... **$9.95**
**GWGW** General Written Theory, 2 tape set ..... **$9.95**
**GWAW** Advanced Written Theory, 4 tape set ..... **$19.95**
**GWEW** Extra Written Theory, 4 tape set..... **$19.95**

**MORSE CODE TEST PREPARATION**

**GWNT** Code Teacher 0-5 WPM ..... **$9.95**
**GWGT** General Class Code, 3-15 WPM..... **$9.95**
**GWET** Extra Class Code, 12-21 WPM ..... **$9.95**

**RADIOTELEGRAPH TRAINING COURSES**

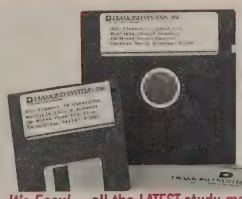
- **Each has 6-tape course prepares you to pass Novice, General or Extra Class exams • "Gordo" voice Instructions • Rapid Farnsworth Method • Plain Language & Random • Lots of Humor!**

**GWN6** For Beginners, 0 to 7 WPM ..... **$29.95**
**GWG6** For Speed Building, 5 to 16 WPM..... **$29.95**
**GWE6** For Advanced Telegraphers, 10 to 28 WPM ..... **$29.95**

## W5YI SOFTWARE

**IBM COMPATIBLE**

**NCS** No Code License Software..... **$29.95**
**HOS** No Code thru Extra Class License Software..... **$39.95**



**DIAMOND Systems**

**Amateur Radio License Study Courses for IBM PC/XT/AT and "look-alikes" using PC/MS DOS**

***It's Easy!* . . all the LATEST study material needed for the FCC Exam • Theory, Code, and Regulations – included.** Prep material for Amateur Licenses Novice through Extra class and No-Code Technician! Software includes complete FCC VEC questions, all sub elements, generates 1000's of practice tests, keeps score, plus a code teaching program.

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|---|---|---|---|
| DS-IBM-N | Novice class.... $39.95 | DS-IBM-G | General class ... $34.95 |
| DS-IBM-T | Technician class.. 34.95 | DS-IBM-A | Advanced class . 49.95 |
| DS-IBM-NC | No Code Tech . 49.95 | DS-IBM-E | Extra class..... 49.95 |

# MICROPHONES • HEADSETS • ACCESSORIES

## HEIL PRO-SET
### *Boomset Headphones*

A rugged, lightweight boomset designed for long wearing time during contests, etc. The headband has detents on each side for adjustment, and is fully padded for comfort. The vinyl earpads are also heavily padded, seal out noise, and are removable for washing. The flexible microphone boom adjusts to about any location and folds up for storage. Includes HEIL HC-4 or HC-5 mic cartridge (below).....$131.95

**AD-1 Adapter Cables (D)** for use with ICOM, KENWOOD, TEN-TEC or YAESU transceivers.....$14.99 ea.

## HEIL PRO-MICRO
### *Boomset Headphones*

The Pro Micro is the newest additional to the Heil Pro line. It replaces the old BM-10 and BM-5 series headsets. It is simply a miniature version of the Pro Set. It's main feature besides being smaller and lighter weight is that it does not cover the entire ear. Hams want to hear their surroundings. Using the Heil Pro-Micro you can do just that. Available with the HC-4 or HC-5 element (below).....$105.95

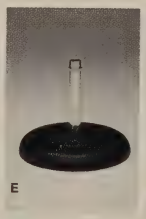
**AD-1 Adapter cables (D)** for use with ICOM, KENWOOD, TEN-TEC or YAESU transceivers.....$14.99 ea.

A

B cable is optional

C

D


E

F

G

**PRO 5 (A)** To answer the concern of not covering both ears, the Pro 5 was created. Provides all of the same quality and performance as the Pro Set with out covering the right ear. Available with either the HC-4 or HC-5 element (below). Use AD-1 adapter (above), specify HC-4 or HC-5 $120.00

**HM-10 MICROPHONE (B)** Hand-held studio-style microphone with desk stand or boom mount options. Choice of HEIL cartridges. Operate PTT or VOX, it's designed to work with virtually any late model transceiver. When ordering specify HC-4 or HC-5 cartridge (below).....$63.96

**HM-10 DUAL (C)** Amateur Radio's *ultimate* microphone. Versatile in that it has *both* HC-4 DX element and HC-5 Full Range microphone cartridges built-in – and switch selectable for varying conditions.....$112.96

**HM-10 CABLES** *(not pictured)* Designed to work with any transmitter. When ordering specify your radio and the HM-10 will be shipped with the correct color coded cables. Specify for ICOM (HEI CC1I), KENWOOD (HEI CC1K) or YAESU (HEI CC1Y), .....$25.99

**TB-1 TABLE BASE (E)** For HM-10 series microphones. 6 inches high, heavy (2 lb., 10 oz) cast metal base with non-skid cork feet. .....$19.95

**MA-1 BOOM AND CLAMP ASSEMBLY (F)** For HM-10 series microphones. The boom is adjustable from 6 to 24 inches and attaches to desk or shelf, or hangs from ceiling. Swivels a full 360° and places HM-10 or DUAL TEN microphone exactly where you want it. You can use the FS-1 footswitch for convenient, hands-free PTT operation.....$49.99

**FS-1 FOOT SWITCH (G)** Provides convenient foot-control of PTT function of any transmitter. Non-skid rubber pad on both top and bottom, supplied with 7 ft. cable and ¼" phone plug. .....$26.95

# HEIL MICROPHONE CARTRIDGES

Most communications microphones today were designed for public address – not for SSB, with the frequency response needed for getting through pile-ups, or providing maximum voice clarity. If you aren't satisfied with the *"sound of your station"*, you can solve this problem by replacing the cartridge in your microphone with a ***HEIL KEY ELEMENT*** for a dramatic improvement. It's tiny in size, and easily replaces existing cartridges in most microphones.

### HC-4 – *The DX Dream Machine*

The replacement microphone cartridge for Contest and DX operators. It's engineered with a high-pitched, pile-up busting frequency response of 500Hz to 3800Hz with a 10dB peak at 2000Hz, and a sharp 12dB per octave roll off at 500Hz. Provides your rig with excellent clarity and more punch for getting through the pile-ups. Impedance: 2kΩ @ 1000Hz – works well into low (500-600Ω) and medium (2k-5kΩ) inputs. Cardioid pattern. Size: 0.530"d x 0.850"w x 0.310"h .....$29.95

### HC-5 – *The Key Element*

The replacement microphone cartridge for everyday Rag Chewing. Engineered with full range articulation and maximum voice clarity. Not mushy, bassy paging-type audio, but very clear, easy-to-understand SSB audio. Response: 350Hz to 4000Hz. with a sharp roll-off under 300Hz and above 3100Hz with a peak at 2100Hz. Impedance: 2kΩ @ 1000Hz – works well into low (500-600Ω) and medium (2k-5kΩ) inputs. Cardioid pattern. Size: 0.530"d x 0.850"w x 0.310"h.....$29.95

# More hams use MFJ accessories than all others in the world!

## NEW! MFJ 2 Meter FM Analyzer™

MFJ-224 $149.95

**MFJ's** revolutionary handheld 2 Meter *FM SignalAnalyzer*™ lets you measure signal strength with over 60 dB dynamic range, check and set FM deviation of your packet and voice radios, measure antenna gain, beamwidth, front-to-back ratio, sidelobe suppression, measure actual feedline loss in dB, and much, much more!

**Plug** in any scope and your MFJ *FM SignalAnalyzer*™ becomes a service monitor! It lets you visually analyze modulation wave forms, measure audio distortion, noise and instantaneous peak deviation. You can tune in any signal between 143.5 and 148.5 MHz. It's built-in discriminator-meter function makes accurate tuning simple and easy.

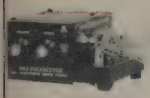
## MFJ-945E Mobile 1.8-30 MHz plus 6 Meter Antenna Tuner

MFJ-945E $89.95

**Don't** leave home without this mobile tuner! Have an uninterrupted trip as the MFJ-945E extends your antenna bandwidth and eliminates the need to stop, go outside and readjust your mobile whip. Now covers 6 Meter band and has antenna bypass switch! Handles 300 Watts.

**Small** 8x2x6 inch black aluminum cabinet uses little room. The new Cross-Needle meter shows SWR, forward and reflected power -- at a glance in 300/60 and 30/6 watt ranges. Has on/off lamp switch. Requires 12 volts for lamp. Convenient placement of controls makes tuning fast and easy while in motion. Antenna switch lets you bypass tuner and still use the SWR/Wattmeter. Back panel has SO-239 connectors and wing nut post for your ground.

## MFJ-422C Keyer/Bencher Paddle Combo



MFJ-422C $124.95

**MFJ's** deluxe keyer/Bencher paddle combo is the best of all CW worlds -- a deluxe MFJ keyer in a compact configuration fits right on the Bencher iambic paddle. The MFJ Keyer gives you adjustable weight and tone and has front panel volume and speed controls (8-50 wpm). You also get built-in dot-dash memories, speaker, sidetone and push button selection of semi-automatic/tune or automatic modes. Reliable solid state keying: grid-block, cathode and solid state transmitter.

## MFJ-9406X 6 Meter Adventure Radio with microphone

MFJ-9406X $239.95

**Turn** it on. Distant stations roll in loud and clear, thanks to the MFJ-9406X's quiet crystal-mixed single conversion receiver. It raises 10 watts PEP to new heights -- delivering the punch of a much more powerful radio. Full CW/SSB coverage, low power drain, excellent selectivity, TVI protection -- built-in 7 element 60 MHz low pass filter, full-size analog real S-meter, smooth reduction drive analog VFO tuning, built to last, and is a compact 2½x6½x6 inches. Includes MFJ-290 microphone.

## MFJ-432 Contest Voice Keyer

MFJ-432 $99.95

Has pre-wired micro-phone connector and is programmable for most radios . . . Kenwood, Icom, Yaesu, Alinco. Store frequently used phrases like "CQ Contest this is K9KHW" . . . "You're 59" . . . "Qth is Wisconsin." Let the MFJ-432 *Voice Memory Keyer*™ call CQ, send your call and do contest exchanges for you in your own natural voice! Store four natural sounding messages in a total of 20 seconds. EEPROM technology keeps is stored for years!

## MFJ-462B CW/RTTY/ ASCII/AMTOR FEC Multi-Reader™ taps into secret signals

MFJ-462B $159.95

**Plug** this stand alone MFJ *MultiReader*™ into your shortwave receiver's earphone jack. Watch mysterious signals turn into exciting text messages across the LCD display. No computer, interface, program, special cables are needed. Eavesdrop on the latest breaking news from press agencies all over the world. Plug in your Epson compatible printer for automatic 24 hour-a-day monitoring. Use 12 VDC or 110 VAC with MFJ-1312B AC adapter, $12.95. MFJ-5162, $4.95 Reader-to-radio cable.

**MFJ**

**MFJ ENTERPRISES, INC.**

300 Industrial Park Road,
Starkville, MS 39759

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**Your** MFJ product comes with MFJ's famous *No Matter What*™ one year *unconditional* warranty. MFJ will repair or replace your MFJ product (at our option) *no matter what* for a full year.

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*These are just a few of the many MFJ products that AES stocks and sells! Give them a call for all MFJ merchandise and a great price!*

## MFJ-812B VHF SWR Wattmeter

MFJ-812B $29.95

**The** MFJ-812B is the world's most popular and most affordable VHF SWR/Wattmeter. Has built-in field strength meter. Covers 2 Meters and 220 MHz. Reads forward and reflected power in two ranges 30 or 300 Watts. Reads SWR from 14 MHz thru 220 MHz. Also reads relative field strength from 1 to 220 MHz. Has binding post for field strenth antenna. Two color meter. 4½x2¼x3 inches.

## MFJ-1796 Six Band (40 thru 2 Meters) Vertical Antenna

MFJ-1796 $179.95

**Operate** 40, 20, 15, 10, 6, and 2 Meters with this MFJ-1796 ground independent halfwave vertical antenna -- no radials or ground ever needed! It's only 12 feet high and has a tiny 24 inch footprint! You can mount it anywhere from ground level to the top of a tower -- on apartments, condos, anywhere. Perfect for vacations, field day, DX-pedition, camping, nearly anywhere you go. Frequency selection is fully automatic -- no moving parts, nothing to adjust. Handles 1500 Watts PEP SSB. Omni-directional. Efficient end loading.

**MFJ-557 Code Practice Oscillator w/key.....$24.95**
MFJ-860 Cross-Needle Wtmtr 1.8-60 MHz.....$39.95
**MFJ-862 Cross-Ndl Mtr 144/220/440 MHz.....$49.95**
MFJ-864 Cross Ndl Mtr 1.8-60/144/440 MHz.....$79.95
**MFJ-1118 High current DC Multi-outlet.....$69.95**
MFJ-1702B 2 pos. antenna switch, 450 MHz..... .$21.95
**MFJ-1704 4-pos. antenna switch, 500 MHz.....$59.95**
MFJ-1721 2-Meter Mag mount *UltraLite*™.....$14.95
**MFJ-1722 Dual band mag *mnt UltraLite*™ .....$18.95**
MFJ-1724B Dual band mag mnt w/BNC.....$14.95
**MFJ-1728B 2 Meter 5/8 wave mag mnt.....$24.95**
MFJ-1729 Super Gain Dual Band mag mnt.....$29.95
**MFJ-1730 Pocket Roll-Up Antenna 2 Meter....$14.95**
MFJ-1734 Glass Mount Dual Band Antenna.....$39.95
**MFJ-1738 2 Meter Glass Mount Antenna.....$29.95**
MFJ-1740 1/4 Wave ground plane, 2Meter.....$12.95
**MFJ-1750 5/8 Wave ground plane 2 Meter.....$19.95**
MFJ-1754 Dual Band base 144/400 Antenna.....$24.95
**MFJ-1762 three element 6 Meter Antenna.....$69.95**
MFJ-1763 portable three element 2M Antenna.....$39.95
**MFJ-1764 Dual 2-Meter 5/8 wave/6 Meter.....$44.95**
MFJ-1768 Dual Band 144/440 MHz Yagi.....$69.95
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MFJ-1774 40 M dipole ant for CW/SSB trans.....$34.95
**MFJ-1776 Six Meter dipole ant for CW/SSB....$34.95**
MFJ-1778 G5RV All Band HF Antenna.....$29.95
**MFJ-1786 10-30 MHz Hi-Q Loop Antenna....$269.95**
MFJ-1788 40 Meter Super Hi-Q Loop Ant.....$329.95
**MFJ-1798 Vertical Antenna 80M thru 2M....$249.95**
MFJ-2400 Baud modem for packet (Reduced!) - $29.95
**MFJ-4110 AC Portable Power Sup/120 V.....$39.95**
MFJ-4114 Rechargeable Power Pack/120 V.....$64.95
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**You** get *four* instruments in one -- 10-digit LCD frequency counter, RF signal generator, *SWR Analyzer™* and *RF Resistance Meter™*.

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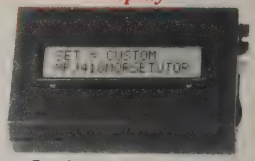

**Learn** Morse code fast any where, any time with this tiny *MFJ Pocket Morse Code Tutor™*! MFJ-418 gives you a large LCD display that reads out letters, numbers and punctuation in plain English. *See code as it's sent!*

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### *300 Watt Roller Inductor Tuner*

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### *MFJ-962C versatile 1.5 KW Tuner*

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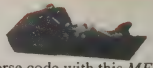
**Use** your barefoot rig now and have capacity to add a 1.5 KW PEP SSB amplifier later! Lighted Cross-Needle SWR/Wattmeter, 6 position antenna switch, Teflon® wound balun, ceramic feedthru insulators for balanced lines, 1.8-30 MHz operation. 10¾x4½x4⅞ inches.

### *MFJ-557 Code Practice Oscillator*

MFJ-557
$24.95



**Have** fun learning Morse code with this *MFJ Deluxe Code Practice Oscillator™*. Morse key and speaker mounted on heavy steel base -- stays put. Earphone jack, tone, volume controls, adjustable key. 8½x2¼x3¼ inches.

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**MFJ-112 Deluxe world map clock.....$24.95**
MFJ-116 ID Timer LED clock 12/24 hour.....$14.95
**MFJ-201 1.5-250 MHz dip meter.....$109.95**
MFJ-212 *MatchMaker™* for tuner.....$79.95
**MFJ-219 440 MHz *SWR Analyzer*.....$89.95**
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**MFJ-264 Dry dummy load, 0-650 MHz.....$59.95**
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**390 Test Bench™ (left)** A multimeter. with AC/DC Voltmeter, AC/DC Ammeter, Ohmmeter, Capacitance Meter, 500kHz Frequency Counter and Temperature meter in one package. 0.1% DCV accuracy; Analog bargraph; Auto/manual ranging; 4,000 count LCD display; Relative mode; Min-max average; Memory; Audible continuity; Data hold. 7½" x 3½" x 1½", 17 oz. .. **$134.95**

**2860A Digital Multimeter (center)** Rugged construction with water resistant case. Functions: AC/DC Voltmeter; AC/DC Ammeter (20A); Ohmmeter; Audible Continuity Check; Diode Tester. 3½-digits, easy to read 0.8" LCD. 6⅞" x 3⅞" x 1¼", 12 oz. ..... **$84.95**

**2704A Digital Multimeter (right)** Measures: DCV 200mV-1000V; ACV 200mv-750V; DC and AC current to 10A; Ohms, 0.1Ω to 20MΩ; Capacitance to 20uF; and Transistor gain. 5¾" x 3" x 1¼", 13 oz. ..... **$49.95**

**878 Dual-Display LCR Meter with Statistical Functions** (left). Excellent for sorting parts. Displays measured value and Q or dissipation factor and remembers minimum and maximum values while keeping a running average of tested component values. Relative mode displays difference between the measured and reference component values. Tolerance mode "beeps" to indicate measured components outside a 1%, 5% or 10% tolerance around a reference value. Selectable, 120Hz or 1kHz. 1½" x 3½" x 7½", 14 oz. ..... **$219.95**

**815 Parts Tester** (center) Tests transistors, SCRs, diodes, LEDs & batteries under actual load conditions. Capacitance 0.1pF-20mF; Resistance 0.1Ω-20MΩ, 26 ranges. 0.8" LCD. 6⅞" x 3⅞" x1¼", 12 oz. ..... **$84.95**

**4011 5MHz Function Generator** (right). Generates sine, triangle, square, pulse and ramp waveforms. TTL & CMOS Pulse outputs. 9¼" x 3¼" x 11¼", 6 lbs. **$239.95**

### B&K General Purpose Lab Quality Power Supplies

**Reverse polarity, overload thermal and short circuit protected. Tight regulation, low ripple. Conservatively rated for continuous operation at maximum rating.**

**1686 High Current (left)** Output: 3 to 14VDC @ 2.5 to 12A. Continuous 12A duty at 13.8V DC without overheat. Reverse polarity, overload and short circuit protection. Current limiting. Connect two in parallel to double the current, or two in series to double the voltage. Voltage and current limiting adjusments. 5½" x 5¾" x 12", 12 lbs ..... **$169.95**

**1651 Triple Output (right)** Output: Two 0 to 24 VDC @ 0.5A; One fixed 5V at 4 Amps, continuous. Independent tracking, adjustable current limiting. Short circuit, overload, reverse polarity protection. 3¾" x 9½" x 7½", 11 lbs..... **$359.95**

### Scopes and Counters

For design, service or hobby. Scopes ranging from a 20MHz analog dual-trace unit to a versatile digital storage model. Multi-function counters built for continued high accuracy over a wide range of frequencies.

**See Price List for a complete B&K listing**

## K-COM Telephone RF Interference Filters

**Cure telephone RF interference in the most irritating cases even when dealing with transmitters with full legal power output. Use any number of filters with no adverse effect on telephone performance. Fully assembled, with complete installation instructions.**

**RF-1** For single line equipment including wired and cordless telephones, answering and fax machines, modems, etc. Standard modular connectors.....**$16.95**

**RF-1/2-line** The correct filter for two-line telephone sets. and multi-line multi-station electronic key phone systems in business environments.....**$22.95**

**RF-1/coiled** For use when RFI enters through the coiled telephone cord between base & handset**$22.95**

**RF-2** Hard-wired, provides a wide range of installation options to add RFI rejection at a variety of physical and electrical locations in the system wiring. Inside phone jacks, behind wall mounted telephones, security systems, etc ..... **$10.95**

## DIGIMAX Frequency Counters

**Delivering Maximum Performance & Accuracy – 50Hz to 1.2 GHz**

### D-1200 & D-612 Frequency Counters

Ideal for solving difficult bench and field problems involving complex PLL, TV Tuner, VTR, and computer circuits. – plus, they can help to keep your QSOs on the correct frequency! Both models meet FCC land mobile, broadcast, and telecommunications specs. 9-digit LED, 0.5"- 7 segment display, leading zero suppression for error-free readings. Built-in 10 MHz, 0.1 PPM (20°-40°C) 10MHz proportional oven. For audio tones, the built in audio multiplier in the D-1200 will resolve 1/1000Hz in 10 seconds, 1/100Hz in 1 second., and 1/10 Hz in 0.1 second. The. D-612 resolves 1 Hz in 1 second.and 1/10 Hz in 10 seconds. The D-1200 also has a prescale input sensitivity control and the D-612/D-1200 includes a 1.2 GHz prescaler. Both operate from external. 8 to-14.5V DC @ 200-500ma., 6 internal "C" cells, 115V with opt. AC adapter or optional rechargeable battery. 3¼"h x 8½"w x 9"d. D-612 does not include a carrying handle. **D-612 $229.95 • D-1200 $269.95.**

### D-500/D-510A Frequency Counters

Excellent accuracy and high reliability, make these units the perfect choice for the bench, tool box, or ham shack. The **D-500** covers 50Hz to 512 MHz and will resolve from 1 Hz to 50 MHz and 10 Hz to 500 MHz; **D-510A** covers 50 Hz to 1 GHz. and will resolve 10 Hz to 1 GHz. 8 digit LED, 0.5" high seven segment display, leading zero suppression for error-free readings. Contains a 1 PPM (17° to 35°C) TXCO time base. Operates from external 8-14.5V DC @100-250ma., 115V with optional AC-12 adapter or optional rechargeable battery pack. 1½"h x 5"w x 5¼"d.

D-500 **$139.95** • D-510A **$159.95**

### Optional Digimax Accessories

**AC-12** 12V DC Adapter ..... **$8.95**
**B-12** Dry Cell Holder and switch for D-612..... **$10.95**
**BAC-5** Nicad Battery Pack; D-500 & D-510A..... **$29.95**
**BAC-12** Nicad battery Pack for D-612/D-1200 ....**$34.95**
**RF-500X** In-line RF Sampler, 250W max.....**$39.95**
**T-1200** 21" BNC Telescopic Antenna.....**$8.95**

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BIRD

Carrying case, dummy load, elements and connectors are optional.

Case will hold three additional elements (6) instead of dummy load as shown.

### 43 THRULINE® Wattmeter

Measures incident and reflected power in coaxial transmission lines with 5% of full scale accuracy; insertion VSWR is less than 1.05. Comprised of a line section, and a direct-reading meter with expanded scales in 25, 50 and 100 units. Rugged aluminum case. Supplied with SO-239 Quick Change (QC) type connectors; optional N and BNC types available. Optional plug-in elements provide a wide choice of frequency ranges from 2–1000MHz, with power levels up to 5000W (2–30MHz) and up to 1000W (30–1000MHz). Select one or more elements now, add others as needed. 6¾"hx5⅜"wx3⅜"d, 3 lbs ..... **$263.95**

### 43P Peak Reading Wattmeter Meter

Same versatile functions as the BIRD 43, but includes switch selectable Peak Reading (PEP) capability. Uses the same plug-in elements, QC connectors & accessories. Uses (2) 9V batteries..... **$396.95**

### 4431 THRULINE® Wattmeter

Same as the 43, has a built-in variable RF signal sampler to provide an adjustable low level signal sample for counters, scopes, analyzers, etc ...**$464.95**

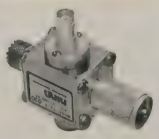
**TABLE 1 Standard BIRD Elements**

| Power Range | Frequency Bands (MHz) 2-30 | 25-60 | 50-125 | 100-250 | 200-500 | 400 1000 |
|---|---|---|---|---|---|---|
| 5 watts | — | 5A | 5B | 5C | 5D | 5E |
| 10 watts | — | 10A | 10B | 10C | 10D | 10E |
| 25 watts | — | 25A | 25B | 25C | 25D | 25E |
| 50 watts | 50H | 50A | 50B | 50C | 50D | 50E |
| 100 watts | 100H | 100A | 100B | 100C | 100D | 100E |
| 250 watts | 250H | 250A | 250B | 250C | 250D | 250E |
| 500 watts | 500H | 500A | 500B | 500C | 500D | 500E |
| 1000 watts | 1000H | 1000A | 1000B | 1000C | 1000D | 1000E |
| 2500 watts | 2500H | | | | | |
| 5000 watts | 5000H | | | | | |

**TABLE 2 Low-Power BIRD Elements**

| 1 watt | Cat. No. | 2.5 watts | Cat. No. |
|---|---|---|---|
| 25-30 MHz | 025-1 | 25-30 MHz | 025-2 |
| 30-35 MHz | 030-1 | 30-40 MHz | 030-2 |
| 35-40 MHz | 035-1 | 40-50 MHz | 040-2 |
| 40-50 MHz | 040-1 | 50-60 MHz | 050-2 |
| 50-60 MHz | 050-1 | 60-80 MHz | 060-2 |
| 60-80 MHz | 060-1 | 80-95 MHz | 080-2 |
| 80-95 MHz | 080-1 | 95-150 MHz | 095-2 |
| 95-125 MHz | 095-1 | 150-250 MHz | 150-2 |
| 110-160 MHz | 110-1 | 200-300 MHz | 200-2 |
| 150-250 MHz | 150-1 | 250-450 MHz | 250-2 |
| 200-300 MHz | 200-1 | 400-850 MHz | 400-2 |
| 275-450 MHz | 275-1 | 800-1000 MHz | 801-2 |
| 425-850 MHz | 425-1 | | |
| 800-1000 MHz | 801-1 | | |

### BIRD Variable RF Signal Samplers



Provide stand alone wide-range, THRULINE® RF coupling probes for spectrum analysis, RF signal observation on a scope, or frequency counting and control.

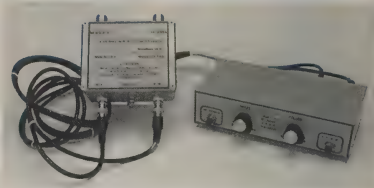
*See Price List for BIRD accessory pricing*

## *Affordable...* RF Applications, Inc.

### High Performance & High Quality RF Power Measurement Systems

### P-3000 HF Power & VSWR Indicator

Microprocessor based for fast, accurate Power and VSWR readings from 1.8–30MHz and 15 to 2950 watts, without adjustments or calibration. *Three separate instruments in one:* Peak Digital Power Display, VSWR Display with Alarms and 10-LED Instantaneous Power Bargraph. During high VSWR conditions a relay contact can interrupt the control line to linear amplifier to reduce the chance of damage. Separate remote directional coupler may be located up to 6 ft. away. 50Ω, SO-239 connector. Requires 12V DC @ 250mA. *Display:* 6½"wx5¼"wx2¼"d; *Coupler:* 4½"wx3¾"hx2¼"d, 6 lbs total ..... **$299.95**



### P-2000CW RF Power/VSWR Indicator

Employs technology developed for the company's other unique digital wattmeters, but uses an audible Morse Code interface to report the values of forward and reflected power. These values are stored during and at the end of each transmission and can be reported via CW while on the air or after the transmission. If the VSWR exceeds a preset value, the operator is alerted with the Morse" V" character, and a relay can provide control to disable a power amplifier, etc. Covers 1.8–30MHz, indicates 5 to 2000W & VSWR. 12V DC. *Display:* 8"wx4"hx 2"d. *Remote Coupler:* 4½"wx3¾"hx2¼"d, 4 lbs.....**$249.95**

### P-2000A RF Power/VSWR Indicator

For HF applications from 1.8 to 30MHz and up to 2000W RF output. It has an adjustable meter response time and uses the same remote coupler as the P-3000 unit. An adjustable VSWR setting and a relay are provided that can be used to disable an amplifier under high VSWR conditions. *Display:* 8"wx4¼"hx2½"d; *Coupler:* 4½"wx3¾"hx2¼"d .....**$299.95**

### P-1500 Digital RF Power & V.S.W.R. Indicator

Covers 1.8 –30MHz, rated at 1.5kW continuous. Built-in coupler. 4-digit LED display, autoranging bargraph. VSWR status lights. 12VDC/100mA 4"wx3½"hx4"d, 4 lbs...**$219.95**

**DC Adapters**

**P-3000-P** 12V adapter for P-3000, P-2000A & P-2000CW..... **$12.95**

**P-1500-P** 12V adapter for P-1500..... **$16.95**

http://www.rfapps.com

### Match Alert™ VSWR Monitor & Alarm

Protection for HF transmitting systems! A microprocessor monitors antenna VSWR and provides a fast visual and electrical alarm if any of eight different dip-switch selectable VSWR presets are exceeded. Covers 1.8–30MHz and is rated at 3000W. A relay contact is available via a 3 ft. cable for millisecond control of an external function such as shutting down an amplifier, etc. Cast aluminum enclosure, PL-259 connectors, requires 11–16V DC. PL-259 connectors.....**$129.95**

### DIAMOND ANTENNA SWR/Power Meters

*Five models,* measure Power & SWR with 5–10% of full scale accuracy. Illuminated meter, sensor switch & LED indicator. Power ratings listed below are for intermittent operation. For continuous mode (CW, FM, etc.), ratings vary with frequency. All have SO-239 connectors, except the SX-1000 which has a type-N. The SX-600 and SX-1000 are dual-band. 12VDC is required for displays. 6"wx2½"hx4"d, 2 lbs.

**SX-100** 1.6-60MHz, 30/300/3kW ranges **$149.95**

**SX-200** 1.8-200MHz, 5/20/200 ranges.....**109.95**

**SX-400** 140-525MHz, 5/20/200W ranges ..**129.95**

**SX-600** 1.8-160MHz and 140-525MHz, 5/20/200W ranges .....**179.95**

**SX-1000** 1.8-160MHz and 430-1300MHz, 5/20/200W ranges.....**249.95**

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**FLORIDA STATE FAIR GROUNDS EXPO HALL • TAMPA, FL**

### MIRAGE SWR/Power Meters

Four models, all measure RMS and peak forward and reverse power and SWR, directly. Negligible insertion loss. Remotable coupler, SO-239 connectors. Requires 9V battery, 9 to 13.6V DC, or AC adapter. Low battery indicator. 5¾"hx4½"wx5¾"d, 3½ lbs.

**MP-1** 1.8–30 MHz; 25, 200, 2kW ranges ....**$219.95**

**MP-2** 50–200MHz; 50, 500, 1.5kW ranges... **219.95**

**MP-3** 425–450MHz; 5, 50, 150W ranges..... **249.95**

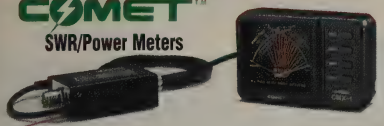
**MP-4** 1260–1300MHz; 1, 10, 100W ranges . **259.95**

### YAESU SWR/Power Meters

**YS-60** Monitors Average (CW) and Peak (SSB) transmitter output, and VSWR of antenna systems. Covers 1.6–60MHz up to 2KW with meter ranges of 20/200/2000W. 50Ω, SO-239 connectors. Requires 12V DC for meter lamps and internal operational amplifier circuits. 4¾"wx2¾"hx3½"d, 1½ lbs . **$129.95**

**YS-500** Similar to YS-60, but covers 140–525MHz, 4/20/200W ranges. 12V not required ..... **$109.95**

## COMET™ SWR/Power Meters



*Three models*, with separate meter and RF sensor with 6 ft. long cable. Lighted, cross-needle meter with three selectable power ranges, shows forward and reflected power, and SWR simultaneously, plus indicates DC voltage from power source. 50Ω, 12VDC. 4¾"wx3⅜"hx1¾"d, 1 lb, 4 oz.

**CMX-1** 1.8–60MHz; 30, 300, 2kW ranges .. **$189.95**
**CMX-2** 1.8–200MHz; 20, 50, 200W ranges.. **179.95**
**CMX-3** 140–525MHz; 20, 50, 200W ranges. **169.95**

**NGC-3000**
**Bench SWR & Power Meter.**
Covers 118 to 530MHz. Large iluminated meter, 5W/20W/200W ranges. Average and PEP readings. Requires 12V DC 7½"wx 3¼"hx4¼"d, 2 lbs .... **$99.95**

*More Comet meters – see Price List*

## KENWOOD

**SW-2100 SWR & Power Meter**
Covers 1.8 to 30MHz. Dual meters simultaneously display RF power up to 2000 watts & VSWR. Ranges: 0-200W and 0-2000W. Requires 30W RF for VSWR measurement. 52Ω impedance. S0-239 connectors. 8"wx2⅝"hx3⅜"d, 1.9 lbs **$159.95**

## VECTRONICS

**SWR & Power Meters**

**PM-30HF** Similar to shown. RMS or PEP forward and reflected power and SWR simultaneously. Illuminated cross-needle meter. 1.8–60MHz, 300 & 3000 watt ranges. 5⅝"h x 3½"hx5¾"d, 1.2 lbs ...**$74.95**

**PM-30UV** (shown) Same features as HF but covers 144, 220 and 450MHz bands..... **$84.95**

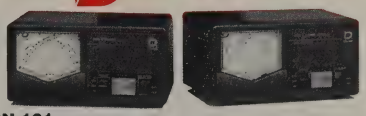
## VANCO *Low Cost* Meters

**SWR-1**
**Field strength/SWR meter**
**Range:** 3.5–150MHz; Impedance: 52Ω; SWR: 1:1–3:1; **Accuracy:** 55%; **Meter Sensitivity:** 300uA; **Antenna:** 5" whip; 6"h x 2"w x 2⅞"d, 14 oz. . **$19.95**

**SWR-2**
**SWR/Power meter**
**Range:** 1.7 to 150MHz; **Impedance:** 50–52Ω; SWR: 1:1–3:1; **RF Power:** 0–10 and 0-100 watts; Accuracy: (SWR) ± 5% (Power) 10%; **Sensitivity:** 200 uA; Size: 6"wx2"hx2"d, 14 oz..... **$29.95**

**SWR-3**
**SWR meter**
**Frequency Range:** 1.7 to 30MHz; **Impedance:** 50–52Ω; **SWR:** 1:1–3:1; **Accuracy:** ±5%; **Meter Sensitivity:** 300uA; **Size:** 2½"x3½"x3", 6 oz.. **$14.95**

## DAIWA



**CN-101**
**Cross-Needle Power/SWR Meter** (left)
Covers 1.8–150MHz, rated at 1500W from 1.8 to 60MHz & 1000W at 144MHz. 15/150/1500W RMS or PEP power ranges. Cross-needle meter indicates forward/reverse power and VSWR simultaneously. at ±10% full scale accuracy. SO-239 connectors. 6"wx3"hx3⅞"d, 1½ lbs..... **$89.95**

**CN-103M**
**Cross-Needle Power/SWR Meter** (right)
Same as CN-101, except covers 140 to 525MHz and has 20/200 watt meter ranges ..... **$99.95**

**NS-660PA**
**Cross-Needle Power/SWR Meter** (left)
Covers 1.8–150MHz, with 30/300/3000W ranges. Cross-needle meter shows RMS or PEP forward and reverse power, and SWR simultaneously. 50Ω, SO-239 connectors. 7¼"wx3¾"hx5⅞"d, 2¾ lbs....**$199.95**

**DP-830**
**Digital Power/SWR Meter** (right)
Covers 1.8–150 and 149–525MHz. Fully automatic! Large LCD displays forward RMS or PEP power, and SWR by digits and a bargraph, simultaneously. Power rating: 1.5KW from 1.8–150MHz & 150W from 140–525MHz. SWR beep tones, clock functions displays 4 different times, type-N connectors. 5⅞"wx2½"hx4⅜"d, 2¼ lbs..... **$319.95**

**DP-820**
**Digital SWR Meter**
Same as DP-830, except covers 140 to 525MHz, rated at 150W UHF. conectors ..... **$249.95**

**DP-810**
**Digital SWR Meter**
Same as DP-830, except covers only 1.8 to 150MHz, rated at 1.5kW..... **$229.95**

**CN-410M Compact SWR and Power Meter** For mobile or base use. Covers 3.5–30MHz, rated at 150W with 15/150W forward & 50W/5W reflected power ranges. The backlighted, cross-needle meter shows forward/reverse power and SWR simultaneously. SO-239 connectors, mounting bracket. 2¾"wx3"dx3⅜"d, 10 oz .....**$89.95**

**CN-460M** Same features and rating as CN-410M, except the 140–450MHz..... **$89.95**

**CN-465M** Same features as CN-410M and CN-460M, except covers 140 to 450MHz and 15/75W forward and 5/25W reflected ranges. ..... **$89.95**

***New!* AMERITRON AL-572 – 1300W PEP SSB & 1000W CW output , 160–15M – $1395.95**

• (4) rugged Svetland Russian 572B tubes, near legal limit power & 3-second warm-up • Built-in multi-voltage AC supply • Lighted Cross–Needle meters • Dynamic ALC • Tuned 50Ω input • QSK Compatible • Fan Cooled Vernier Reduction drives on Plate & Load • 8½"h x 15½"d x 14½"w.

## NEW WAVE Antenna

### PORTAPLE Collapsible Masts

**For portable or temporary antenna installations!**

These telescoping 7-section, 6063-T832 polished aircraft aluminum masts taper from 2" to 1¼" and are easily raised by one person at ground level in seconds. Each section joint has a 4" overlap and snaps into place. Rotates at any section along its length, or locks.

**Adventurer**
47" to 12 ft....**$109.95**
**Traveler**
59" to 19 ft ....**$124.95**
**Rover**
71" to 26 ft ....**$149.95**
**Expeditioner**
83" to 33 ft ....**$174.95**
**Explorer**
95" to 40 ft ....**$199.95**

**Big Foot**
Park-on steel mount for supporting portable masts. Primed, ready to paint. 8¾ lbs.... **$119.95**

## Forbes Group

### Ventenna™

Get around those antenna restrictions and finicky neighbors. The **Ventenna** is virtually unnoticeable because it looks like part of the normal structure. To install, just slip it over an existing 1" to 2½" plumbing vent pipe, connect up your coax and you're on the air.

**Ready to go! – No Tuning or Measuring required.**

**Single band models for 2 meters, 220MHz or 440MHz & a 2M/440MHz Dual Bander.**

**VT-14** 2 meters, 3 ft. tall, 2.6dB gain ..... **$49.95**
**VT-22** 220MHz, 25" tall, 2.6dB gain ..... **$49.95**
**VT-27** 2m/440MHz Dual bander ..... **$74.95**
**VT-44** 440MHz, 14" tall, 2.6dB gain ..... **$49.95**
**VT-15S** Scanner model 3 ft. tall, 2.6dB..... **$49.95**

## Radio Recyclers

Radio Recyclers, operated in Milwaukee for the past eight years by Neil Lawton, WK9Q, has moved right next door to AES. Specializing in buying, selling & trading used Amateur, Classic, & Antique radio equipment, Radio Recyclers is one of the nation's largest Radio Estate Liquidators and supplier of old parts.

The 3,000 sq. ft. store has a constantly rotating stock of pre-owned radios & accessories, test equipment, & components. There's a huge selection of over 40,000 vacuum tubes of all types, new & used, from miniatures to RF power amplifier types.

Items on the well-stocked shelves and in the bins reveal a 70-year history of radio from the hamshacks of radio experimenters; old-timers & today's amateurs alike. Stop in and visit next time you're at AES, you'll be amazed!

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## STARTEK
FREQUENCY COUNTERS

*STARTEK ATH Series Frequency Counters* are Subcompact, Pocket-size units, designed for ease of use and dependable operation. The Low Cost of these instruments belies the Quality Construction and innovative features found throughout.

*STARTEK* counters are used to find transmitting frequencies, locate RF sources, check all sorts of transmitting equipment for operation and frequency calibration. They are used with antenna analyzers for antenna tuning and to check or monitor the output frequency of transmitters, signal generators. etc.

All *ATH series* counters have High-Speed Response and the special AUTO TRIGGER & HOLD feature, They can display and hold the frequency of a signal in less than 1/10 second. All have two MMIC amplifiers and ultra high sensitivity – less than 1 mV over most of the range. All models have anodized aluminum cabinets with machine thread screws, auto polarity power input (9-12VDC), 6 sample times, a manual HOLD switch, Ni-Cad batteries and 110 VAC adapter. Made in USA.

ATH-10 1 MHz to 1200 MHz. The Worlds least expensive counter with AUTO TRIGGER & HOLD. Excellent economy counter ..... **$159.95**

ATH-15 1–1500 MHz. 2 inch, 10 segment signal strength Bar Graph, low battery indicator. .. **$189.95**

ATH-30 1–2800MHz. Signal strength Bar Graph, low battery indicator, reset control and ONE-SHOT feature (single read & hold, does not allow subsequent signal to displace reading, switch selectable). **$249.95**

ATH-50 5 –2800 MHz (2.8GHz). Has HIGH IMPEDANCE input (1 megohm) from 5 Hz to 50 MHz that can be used with probe without excessive circuit loading. Also Bar Graph, low battery indicator, ONE-SHOT and reset control. This compact model does more than most bench counters ..... **$299.95**

OPTION HST High accuracy option. ±0.2 PPM TXCO timebase, 18-40°C. Order the ATH-30/50 counters with this option..... additional **$100.00**

BAND PASS FILTERS Four filters available to extend readability distance: **LP-60** DC-60MHz; **BP-150** 130-500MHz; **HP-400** 400-1500MHz; **HP-800** 800-2000MHz .....each **$ 49.95**

**STARTEK ACCESSORIES** - include a Zipper Case, various antennas, probes, Band Pass Filters, vehicle power adapter, etc. See Price list for complete listing.

*For more technical info:*
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# SONY webTV

- *Internet & World Wide Web Access*
- *Send & receive E-Mail ... More!*
- *Connects to TV & Phone Line*

Internet Terminal and Remote Controller

Wireless IR Keyboard

SONY WebTV is not aimed at the computer user. It provides easy access to the Internet through your family TV via WebTV™, a service of WebTV Networks, a subscription-based on-line service. The monthly fee is very low, with no hourly charges.

It's simple to use and no PC or PC experience required! The affordable set-top Internet Terminal which contains a built-in 33.6 kbps V.34bis modem quickly connects to your family TV set through the audio/video inputs or via RF adapter and to a standard telephone line.

No configuration, no software loading! It is controlled by its own Infrared Remote Controller which allows full operation of WebTV. An optional full-sized wireless Infrared Keyboard is available for convenient armchair operation, or a standard PC keyboard can be plugged in.

During operation, the terminal presents a selection menu on your TV screen that acts as a front end to the World Wide Web. With a few clicks of the IR remote control, you can navigate to the site of your choice. Internet uniform resource locators (URLs) can be input directly as well. Users without the optional keyboard can call up a URL on-screen with the press of a button. An LED indicator lights up to tell you that you have unread e-mail waiting.

Each household account can have up to five users, each with a personal e-mail address, password and "favorites" list, or site bookmarks. The **SurfWatch™** feature gives parents the ability to block or control their children's access to objectionable Web sites and prevent them from receiving unsolicited e-mail.

The WebTV terminal contains a WebTV Port expansion port for future accessories including printers, cable modems or disk drives and other storage devices. An ISO-compliant Smart-Card Slot lets you insert "smart cards" for present and future information and financial transactions involving credit cards, cash cards and ATM. Supports MIDI and RealAudio™ embedded audio files. Flash ROM auto-update feature keeps the WebTV browser current.

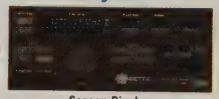
**Standard Accessories:** Remote with multibrand TV control and 10-digit keypad, video/audio cable, S-video cable, phone cable, phone splitter, 2AA batteries, power cord, manual.

**Dimensions:** 11"w x 1⅞"h x 8¼"d, 2.8 lbs.

| | |
|---|---|
| INT-W100 Terminal w/Remote | **$249.95** |
| RM-KW100 Wireless Keyboard | **79.95** |
| RFU-W100 RF Adapter | **49.95** |

## ROSETTA laboratories
## WiNRADiO World Band Radio for your PC

Plug-in Receiver Card



Screen Display

**The WiNRADiO package contains a Receiver Card, Software, Handbook and an indoor antenna.**

**Receiver** • A PC card that simply plugs into a slot in the motherboard of your IBM compatible computer to turn it into a sensitive wideband receiver with awesome features and powerful scanning options. The card contains the entire microprocessor controlled receiver with connectors for an antenna and an external speaker or headphones.

**Software** • The package contains a Windows program with impressive graphics of an actual receiver front panel with readout, labels and controls. Using the keyboard or mouse, WiNRADiO can be operated exactly like a professional radio receiver with features found on high quality equipment. Includes on-line help and a DOS command-line program.

**Handbook** • The handbook provides an introduction to WiNRADiO and radio scanning, with a start-up list of interesting stations to try including NASA space program frequencies. Also contains interfacing information needed by programmers to create their own WiNRADIO applications.

**Technical Specifications**

**Receiver Type:** PLL-synthesized, triple conversion superhet.
**Frequency Range:** 500kHz to 1.3GHz (Cellular Blocked)
**Tuning Steps:** 1kHz to 1 MHz
**Modes:** AM, FM-W, FM-N, SSB
**Sensitivity:** 1uV (nominal
**Audio output:** 200mW into 8Ω load

**$639.95**

**System Requirements**

IBM PC compatible with 386 processor or higher • DOS 3.3 or higher, or Windows 3.1 or higher (including Windows 95) • 640kB RAM (4MB recommended for Windows uses) • Vacant slot for 16-bit interface card • Speaker or headphones with standard 3.5mm stereo plug.

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**BC Series Battery Backup Systems** Offering complete protection against surges, line noise, brownouts and blackouts. Tripp Lite uninterruptible power supplies keep your computer & Ham Radio equipment running in an emergency. Long lasting batteries give you up to 17 minutes backup time for 486/Pentium PCs.

**BC Internet** models have RJ-11 jacks for complete Fax/Modem protection.

*Various Models – See Tripp Lite in the Price List*

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*and ask to be added to the list*

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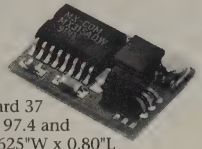
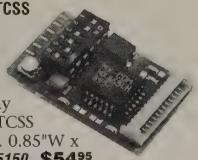
**NC-101 ENCODER**
Micro-miniature CTCSS Encoder, field tunable to any of the CTCSS tone frequencies between 67Hz to 254 Hz. 5 to 15VDC. 0.60"W x 0.80L x O.15H *NorFax™ #5040*....**$19.95**

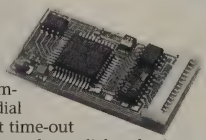


**NC-104 PROGRAMMABLE ENCODER**
Sub-miniature, field programmable CTCSS Encoder unit for limited space. Provides the standard 37 EIA CTCSS tones + 69.37, 97.4 and 205.5 Hz. 7 to 24VDC. 0.625"W x 0.80"L x O.170"D *NorFax™ #5150*.....**$24.95**



**NC-106 PROGRAMMABLE CTCSS ENCODER/DECODER**
A sub-miniature crystal controlled digital unit. Field programmable with dip switches providing any one of the standard 37 CTCSS tones + 97.4Hz. 6-24VDC. 0.85"W x 1.35"L x O.28"H *NorFax™ #5150*..**$54.95**

**NC-401 TOUCH-TONE® DECODER**
A unique micro-miniature unit combining two distinct multi-addressable decoders for control of remote or local applications. Decodes all 16 DTMF characters with an address length of 1-14 characters and features E²PROM memory for storage of both primary and secondary codes, input/output functions, deadbeat disable and user outputs, plus default reset. Programming easily performed by means of a conventional DTMF encoder. 6-24V DC. 0.80"W x 1.37"L x O.23"H. *NorFax™ #5545* **$59.95**



**NC-409 TOUCH-TONE ANI ENCODER**
A micro-miniature unit with field programmable ANI, 15 auto-dial memories and last number redial capabilities, plus transmit time-out timer, busy lock-out, last number redial and microphone mute function. Designed to automatically or manually generate all 16 standard DTMF characters. E²PROM memory provides non-volatile storage of all programmable memories and configurations. Easily programmed by means of any standard X-Y keypad with a common ground. 6–24VDC. 0.85"w x 1.40"L x O.22"H. *NorFax™ #5630*..... **CLOSEOUT $49.95**

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# AZDEN

## 2, 6 & 10 Meter Handhelds

- ★ Heavy duty Commercial Grade construction designed to meet MIL-STD-810. Provides exceptional ruggedness and weather resistance. 2 yr limited warranty.
- ★ 5W battery standard – all models.
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- ★ Memories: 40 in 2 banks, plus 1 temporary.
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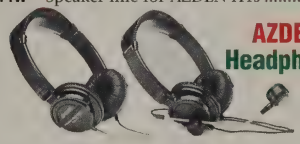
- ★ DTMF Telephone Memory: (7 numbers AZ-21A only)
- ★ Scan Memory Skip
- ★ Auto Power Shut-Off
- ★ Battery Power Saver: Approximately 28 mA in Save Mode
- ★ Dimensions: 6⅞"h x 2⅝"w x 1⅝"h
- ★ Weight: Approx. 1 lb.
- ★ TRANSMITTER: High Power 5 W; Low Power 0.5W

**AZ-21A 2 meters** •144–148MHz transmit, 136 to 174MHz FM+118-135.995 MHz AM receive..**$299.95**
**AZ-61 6 meters** •50–54MHz FM transmit, 46 to 54 MHz FM receive..... **$379.95**
**AZ-11 10 meters** • 28–29.7MHz FM transmit, 28 to 29.995MHz receive ..... **$379.95**
**SDX514W** • Speaker mic for AZDEN HTs ..... **$49.95**

## AZDEN Headphones



The **DM-10** (left) and the **HS-03** with Boom Microphone (right) are designed to enhance voice reception and transmission. Lightweight, soft ear pads and adjustable headband. The earphones have a 20Ω impedance and a 200-5000Hz response with a 6dB rise at 2400Hz. Comes with a A 1/4" phone plug. The dynamic boom mic. on the HS-03 has a 500Ω impedance and a 300-4000Hz response with a 6dB rise at 2500Hz. Comes with an 8-pin connector

**DM-10 $49.95** • **HS-03 $49.95 SPECIAL**

**PTT-01** • Push-to-talk switch for HS-03..... **$39.95**

## 2, 6,10 Meter 220 & 440MHz Mobiles

**Designed to meet the Heavy Duty requirements of MIL-STD-810**

- ★ C-MOS microcomputer control
- ★ Wide frequency coverage
- ★ Adjustable output power
- ★ Large amber backlit display
- ★ 20 channel memory
- ★ Priority channel
- ★ Repeater reverse
- ★ Offset
- ★ Programmable step
- ★ Keyboard up/down frequency selection
- ★ Feather-touch keyboard
- ★ Independent on/off power switch
- ★ Lithium battery back-up
- ★ Multi-function microphone
- ★ Built-in programmable tone encoder
- ★ Optional tone squelch decoder unit
- ★ 2"h x 5.5"w x 7.25"d

**PCS-7000H 2-meters;** 144–148MHz transmit, 136–174MHz FM plus 118-135.995 MHz AM receive, 50/10W..... **$339.95**
**PCS-7500H 6-meters** • 50–54MHz FM transmit, 46–54 MHz FM receive, 50/5 watts..... **$389.95**
**PCS-7800H 10-meters** • 28–29.7MHz FM transmit, 28–29.995MHz receive, 50/5 watts ..... **$389.95**
**PCS-7200 220MHz** • 215–230MHz FM, 25/5W ..... **$409.95**
**PCS-7300H 440MHz** • 420–470MHz FM, 35/5W..... **$439.95**
**PCS-9600D** • **440MHz;** 430–450MHz FM, 35/10W. 9600 baud data. Plug & play from the front panel ...**$649.95**
**TS-32P** • Tone encoder wired for mobiles ..... **$55.95**

**PTT-02 UNIVERSAL VOX** • Gives any radio the advantages of remote manual or **voice-triggered transmission** with variable microphone gain and adjustable frequency equalization. Usable with all types of microphones. A removable belt clip, Velcro tape, and soft desk pad permit universal mounting. An OFF-PTT-VOX switch permits either normal push-to-talk or VOX operation. An adjustable (0 to +8dB) 2kHz gain control coupled with an overall (0 to +10dB) gain control matches most microphones to most radios and shapes the frequency response. 2.4"w x 0.87"h x 3.35"d. Requires a 9V battery..... **$49.95**

*New!* **KENWOOD EZ-Pass**
**No-Code Tech Study Guide Training Materials**
A Windows 95 graphical version of all test questions on the Novice & Technician class FCC licenses on one diskette. DOS version available for non-Windows 95 users. Utilizing the New "Welcome to Amateur Radio" Primer along with the most comprehensive full color Amateur Band Charts available. Includes a $10.00 mail-in certificate redeemable towards a Kenwood radio.
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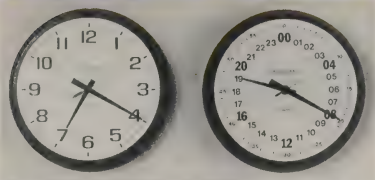
## Clocks for the Ham Shack



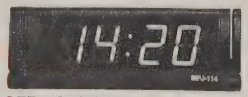
**BMI 972A** (left) Battery operated 12-hour time quartz controlled clock with 12" dial and sweep second hand. Accurate! Black textured case and clear glass crystal. Uses one (size AA) battery. 14" diameter x 1¾" deep. *Looks good in the Shack!* ..... **$28.95**
**BMI 973A** (right) 24-hour version ..... **$49.95**

**BMI 972AD**
14" diameter, 12/24 hour format wall clock ..... **$32.95**

**MFJ 105B**
24 Hour Quartz Wall Clock Handsome black, 10" diameter face, sweep second hand. Uses single "A" battery, not included ..... **$19.95**

**MFJ 112**
**Dx'ers World Map Clock and Calendar**
Adds a touch of class to your hamshack! Features pushbutton selection to highlight and show the month, day and 12 or 24 hour local time in 25 key cities around the world. Large 1/2" LCD readout, alarm function. One-second/day accuracy. Includes handy tilt bracket and lithium battery. 5¼"w x 3¼"h x ⅝"d ..... **$24.95**

**HUGE!**
6.5" high x 13"wide
2.3" high digits



**MFJ 114** Giant LED, 24/12-hour clock. Four gigantic 2.3" digits, the 12 or 24-hour display format is visable 50 away or more! 110VAC with battery back-up. 6½"h x 13"w x 1"d ..... **$39.95**

**MFJ Small 24-hour Clocks** • A Dual Clock with separate UTC & local time displays, and a Single Clock with 24 hour time only. Heavy brushed aluminum frame, 5/8" high LCD numerals, sloped face. Flashing seconds colon, battery included.
**107B** Single Clock, 2¼"w x 1"h x 2"d ..... **$ 9.95**
**108B** Dual Clock, 4¼"w x 1"h x 2"d ..... **$19.95**

**MFJ 116**
24/12 Hour LED Clock with a switchable 24 or 12 hour display. Large, Red 5/8" LED digits. ID timer keeps you legal by alerting you to state your call every ten minutes. 110VAC operation with battery back-up. Compact, 4½"w x 2"h x 4"d .... **$14.95**

Check out the **AES** Web Site at
**http://www.aesham.com**

## ASTRON CORPORATION Power Supplies

*The alternative to more costly "matching" Power Supplies!*

**105–125V AC input, 13.8V DC output; internally adjustable from 11–15V • Electronic regulation with fold-back current limiting and crowbar overvoltage protection • Heavy-duty heat sink • 3-wire cord • One year Warranty • Made in U.S.A.**

**Separate voltage and ampere meters on RS-20M, 35M, 50M and 70M. Separate voltage and ampere meters, plus voltage adjustment (2–15V DC) on VS-20M, VS-35M and VS-50M. RM-35M, RM-50M and RM-60M are Rack Mount models.**

| Astron Model | Cont. Amps | ICS Amps | Size (in.) H W D | Shipping weight | |
|---|---|---|---|---|---|
| RS-7A | 5 | 7 | 3¾ x 6½ x 9 | 9 | **$59.95** |
| RS-10A | 7½ | 10 | 4 x 7½ x 10¾ | 11 | **69.95** |
| RS-12A | 9 | 12 | 4½ x 8 x 10¾ | 13 | **79.95** |
| RS-20A | 16 | 20 | 5 x 9 x 10½ | 18 | **99.95** |
| RS-35A | 25 | 35 | 5 x 11 x 11 | 27 | **149.95** |
| RS-35A/220V | Same as RS-35A but 220V input | | | | **169.95** |
| RS-50A | 37 | 50 | 6 x 13 ¾ x 12 | 46 | **219.95** |
| RS-70A | 57 | 70 | 6 x 13¾ x 12 | 48 | **259.95** |
| **With separate Volt & Amp meters** | | | | | |
| RS-20M | 16 | 20 | 5 x 9 x 10½ | 18 | **119.95** |
| RS-35M | 25 | 35 | 5 x 11 x 11 | 27 | **169.95** |
| RS-50M | 37 | 50 | 6 x 13¾ x 11 | 46 | **239.95** |
| RS-70M | 57 | 70 | 6 x 13¾ x 12 | 48 | **289.95** |
| **Adjustable output; separate Volt & Amp meters** | | | | | |
| VS-20ML | 16 | 20 | 5 x 9 x 10½ | 20 | **139.95** |
| VS-35M | 25 | 35 | 5 x 11 x 11 | 29 | **189.95** |
| VS-50M | 37 | 50 | 6 x 13¾ x 11 | 46 | **259.95** |
| **Rack mount models; separate Volt & Amp meters** | | | | | |
| RM-35M | 25 | 35 | 5¼ x 19 x 12 | 38 | **249.95** |
| RM-50M | 37 | 50 | 5¼ x 19 x 12 | 50 | **279.95** |
| RM-60M | 50 | 55 | 7 x 19 x 12 | 60 | **359.95** |

**Other Models**
**RS-4L** Power supply with built-in cigarette lighter receptacle in the front panel. 13VDC @ 4A peak, 3 Amps continuous. 3½"h x 6½"w x 4¼"d, 6 lbs. **$49.95**
**RS-12S** Power supply with built-in speaker. Rated 13VDC @ 12 Amps peak & 9 Amps continuous. 4½"h x 8"w x 9"d, 13 lbs ..... **$89.95**

### ASTRON Light-Weight Switching Power Suppliies

**SS-25** 12V DC, rated 20 Amps continous, 25 Amps ICS. 3"h x 7"w x 9½"d, 4.2 lbs..... **$129.95**
**SS-25M** As above, with volt/amp meters..**$149.95**
**SS-30** 12V DC, rated 25 Amps continous, 30 Amps ICS, 3¼"h x 7"w x 9½"d, 4 lbs, 8 oz. ..... **$149.95**
**SS-30M** As above, with volt/amp meters..**$169.95**

### ASTRON Power Inverters

**General Purpose**
**12/115** Converts 12V DC to 115VAC @ 60 Hz. Provides convenient AC house current in your Boat, Car, Truck, Camper, etc. Powers your ham rig, small household appliances, TV, tools, radios and lights up to 200W continuous, with peaks up to 240W and overload protected. Note: This unit produces a square wave output which is not recommended for devices where high transients are not tolerable. 4½"h x 8"w x 9"d, 9 lbs. ..... **$64.95**

**28V Aircraft**
**2412** Converts 22 to 32V DC input to 13.8V DC output @ 9 amps. Eliminates tapping into a 28V battery for 12V power ..... **$59.95**
**2412-20** As above, but rated at 16 Amps.... **$79.95**

## TRIPP LITE THE POWER PEOPLE — POWER SUPPLIES

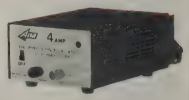
*Powerful Values For Ham Operators*

**105-125V AC INPUT, 13.8 VDC output; Tripp Lite's line of reliable, DC power supplies are perfect for all your Ham radio equipment. A wide selection, including most popular sizes, rugged construction and low prices. Tripp Lite, in business since 1922, provides another high-quality DC power alternative. 1 year warranty.**

**Features include:**
- Current-limiting foldback for complete over current protection
- Crowbar Overvoltage protection on 15 amp and larger models
- Solid state, integrated circuitry
- Metal cases on all models
- High quality filtering for very low ripple/low noise
- Fully regulated output maintains 95% of no-load value
- Unbeatable product support, service & reliability
- Rack mount models available

| Model# | Cont. amps | ICS | Size | Wt. | Price |
|---|---|---|---|---|---|
| PR-7 | 5 | 7 | 3¾ x 6½ x 7½ | 7 | **$49.95** |
| PR-10 | 7.5 | 10 | 4½ x 6¾ x 7¾ | 10 | **69.95** |
| PR-12 | 9 | 12 | 4½ x 6¾ x 7¾ | 11 | **74.95** |
| PR-20 | 16 | 20 | 4½ x 6¾ x 7¾ | 15 | **99.95** |
| PR-30 | 24 | 30 | 6¾ x 6¾ x 10¼ | 23 | **129.95** |
| PR-40 | 32 | 40 | 6¾ x 10½ x 11½ | 27 | **169.95** |
| PR-50 | 37 | 50 | 6¾ x 10½ x 11½ | 30 | **199.95** |
| PR-60 | 48 | 60 | 6¾ x 10½ x 11½ | 33 | **239.95** |

## AIM ELECTRONICS



**38-384**
**Light Duty DC Power Supply** Input: 115V AC. Output: 13.8V DC regulated @ 4A Front panel binding posts, LED "on" indicator, fuse protection. 7¾" x 4¾" x 3", 5½ lbs .... **$39.95**

**38-305**
**AC Adapter** Provides multiple low-voltage DC to operate various battery powered equipment requiring 3, 4.5, 6, 7.5, 9 or 12V DC @ 500ma. Multiple application plugs and 9V snaps fit most devices..... **$9.95**

**38-312**
**Regulated AC Adapter** Multi-voltage with multiple plugs and 9V snaps. Provides 1.5, 3, 4.5, 6, 7.5, 9 or 12V DC regulated @ 1200ma. to operate a wide range of battery operated devices.. **$24.95**

## PERIPHEX REPLACEMENT BATTERIES

**Spend less money for longer QSOs with power packs from Periphex!**
They offer improved operating time when compared to the standard batteries that come with the radios. Replacements for most ALINCO, ICOM, KENWOOD & YAESU handheld radios. These Super Packs feature short circuit and overcharge protection, and a 12 month warranty.

**See Periphex in the Price List**

# YOUR BEST BUY IS ADI !

**ADI**'s new generation of no-nonsense transceivers give you all of today's most wanted features at the absolute lowest possible cost. They are powerful, sturdy-built and easy to use. Check one out at your favorite dealer today!

## AT-600 DUAL BANDER

NEW!

Maximum performance for the budget-conscious amateur - that's ADI's 2m/70cm AT-600. Easy to learn!

- Tx 144-148 & 430-450MHz
- Rx 130-174 & 400-470MHz, also Rx 900-985
- 108-137MHz AM air Rx • MARS/CAP capable
- Simultaneous VHF/UHF receive or singleband operation
- Crossband repeat
- Separate VHF/UHF volume & squelch controls for each band
- Alphanumeric, Frequency or Channel display
- 200 memories store any offset or tone
- CTCSS encode and decode included
- 10 DTMF/autodialer memories
- DTMF paging included
- Auto Power Off & Battery save
- 2.5w & 5w versions available
- Small! 5.5" x 2" x 1.5"
- PC programmable
- Backlit key pad and display
- Battery voltage meter function
- Wireless Cloning
- Manual or Automatic Tx offset

**Loaded with features! A true dual bander!**

## AT-201/2m AT-401/70cm

NEW!

- 40 memories store any offset or tone
- Tx/Rx 144-148 Rx expands to 130-179MHz (AT-201)
- Tx/Rx 430-450 Rx expands to 400-480MHz (AT-401)
- Cloning function
- Programmable band, memory, 1 MHz scan
- Manual or automatic Tx offset
- CTCSS encode & decode included
- Dual Frequency Watch
- Call Channel
- Frequency or Channel display
- Backlit LCD & keypad
- MARS/CAP capable
- DTMF paging included
- 2.5w & 5w versions available
- Small! 5.5" x 2.0" x 1.3"

**Still available: ultra-low priced AT-200/2m & AT-400/70cm. Ask your dealer for details.**

## AR-146/2m & AR-446/70cm MOBILES

- Tx/Rx AR-146: 144-148 Rx extends to 130-180MHz
- Tx/Rx AR-446: 430-450 Rx extends to 420-480MHz
- Power: AR-146: 50/10/5w. AR-446: 35/10/5w
- MARS/CAP capable
- 40 memories store any frequency, offset or CTCSS tone
- Programmable band and memory scanning
- Dual Frequency Watch
- CTCSS encode and decode included
- DTMF paging included
- DTMF decode & display
- Multi Function DTMF mike
- Tx timer & auto power-off
- Frequency or channel display
- 4 step display dimmer
- Size: 1.5" x 5.5" x 6.25"
- Easy mobile operation. Conveniently located controls

**A great radio with quality performance without compromise!**

PREMIER COMMUNICATIONS
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http://www.adi-radio.com

# WHAT'S NEW AND EXCITING FROM AMATEUR RADIO'S VALUE LEADER?

*Great new radios that are fun, easy to operate and very affordable!*

## NEW DJ-S11T 2 Meter Pocket Radio

**It's the one you asked for!** Full 2 Meter coverage (144 ~ 148 MHz), 21 memories, CTCSS encode, self-storing telescoping antenna, accepts speaker mic and outside power, runs on 3 AA batteries, even has MARS/CAP capability. Get all this and more at a price under $150!!

## DJ-S41T 70 cm Pocket Radio

Already a "best seller," the DJ-S41T covers 425 ~ 450 MHz, has 21 memories, CTCSS encode, self-storing pivot antenna, accepts a wide range of accessories. Perfect for use with repeaters, simplex or cross band links. At under $150, every ham in the family can own one!

## DR-605T(Q) 2 Meter + 70 cm Mobile/Base

The reviews are in and the DR-605T is a winner! Work repeaters, simplex, cross-band, even satellites. 102 memories, CTCSS, built-in antenna duplexer, MARS/CAP capability, clone function, 9600 packet port and more at a price so low, it's hard to believe.

## DR-140T(Q) 2 Meter Mobile/Base

A new full-featured radio with Alphanumeric display (up to 7 characters), 51 memory channels, aircraft (AM) plus extended VHF receive, CTCSS + European Tone Bursts, MARS/CAP capability, clean design, scanning and cloning functions, all at a very low Alinco price.

## HF+6 Meter DX-70 TH and DX-70T

Choose your preference in output power on 6 meters. The DX-70TH transmits up to 100 watts on all Amateur Bands, 160 ~ 6 Meters; the economical DX-70T is 100 watts on HF, 10 watts out on 6. With either radio you get General Coverage Receiver (150 KHz ~ 30 MHz and 50 ~ 54 MHz), face plate that can be remote mounted, built in narrow filter and speech processor, full QSK, semi or automatic break-in, multi-function control and more. Be sure to check out the EDX-2 Antenna Tuner and Alinco's Bonus Offer!

## EDX-2 Automatic Antenna Tuner

Connects directly to any Alinco DX-70 model, quickly tunes a wire or mobile whip antenna at the touch of a button. Perfect for mobile, portable, base or marine HF operations. Matches 160 ~ 10 meters (minimum 40 foot wire antenna required for 160 meters, 9.8 foot minimum for others.) Can be mounted outdoors. **Bonus! Free world time alarm clock if you purchase EDX-2 in combination with either DX-70 model prior to June 30, 1997. Ask dealer for details!****

**Offer good while supplies last. Offer applies only to purchases made between May 1 and June 30, 1997. Clock requests must be postmarked no later than July 14, 1997. Please allow 4 to 6 weeks for processing. Void where prohibited.

Prices mentioned are MSRP, dealer prices may vary. Permits required for MARS/CAP use. Performance specifications only apply to amateur bands. Specifications subject to change without notice or obligation.

**Simple ▪ Clean ▪ Dependable**

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***AMATEUR RADIO'S VALUE LEADER℠***

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Ask your dealer about Alinco's 2-year extended warranty program

# Full Line of *quality* Handheld Accessories....

## NICKEL METAL HYDRIDE BATTERY PACKS & CHARGERS

- ✔ **No** memory effect
- ✔ 50-100% **more** capacity than same size NiCad
- ✔ **Light** weight
- ✔ Flat Discharge Curve
- ✔ **Small** Size
- ✔ Environmental **friendly**
- ✔ Many other models available

**1800mAh**

***MH-FNB-V47***
**For Yeasu FT-50R/10R/40R**
**Vertex VX-10**
**1800mAh, 7.2v**
**Spring Loaded Clip included!**

**NEW !**

***MH-BP-173***
**For Icom**
**T7A/Z1A/T22A/W31/W32**
**650mAh, 9.6v**

**MH-101 series NiMH/NiCD rapid smart chargers for popular radios!**

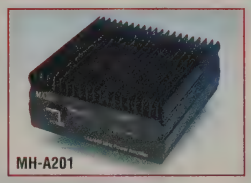
## POWER AMPLIFIERS

MH-A301

Maha's new **docking boosters** are the affordable solution to your weak signal problems. The MH-A300 series docking booster utilizes a compact amplifier, and with the appropriate adapter, you will boost the 5 watt output power of your handheld to the higher output power of a more expensive mobile radio while maintaining the portability of your handheld. You can instantly switch from a powerful mobile radio to a portable handheld with ease! Put your radio on Maha's new MH-A300 series docking booster and see what it can do for you!

**MH-A201**

- ✔ 144/440MHz Dual Band
- ✔ 2m: 45W 70cm: 35W
- ✔ Full duplex operation
- ✔ Auto band selection
- ✔ Super High Quality



MH-A201

**Many other models available!**

### USE AS A HT DOCKING POWER SUPPLY

**MH-800S:**
**For Alinco/Icom/Standard Yaesu**

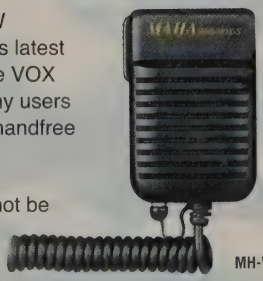
**MH-800K:**
**For Kenwood**

You are looking at the best speaker/microphone in the industry. The MH-800 series consists a 500mW super speaker, and a crystal clear microphone. It can sound as good as your rig! Put the Maha MH-800 series speaker/mike on your handheld and experience the difference!

**$ 19.95**
**AES Special Price**

## SPEAKER/MICROPHONES

Look at this great super 500mW speaker/mike! It also got Maha's latest patented VOX circuitry, too! The VOX feature is sure a plus while many users such as yourself, now require handfree operation! It is also very safe!




MH-VOX

- ✔ Super noise immunity. Will not be activated in a 6000rpm running car.
- ✔ Maha VOX provides maximum protection against accidential transmission.
- ✔ Use as a PTT too! Instantly switch from PTT to VOX.
- ✔ Special designed clip.

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**2841-B Saturn St. Brea., CA 92821. Tel: 1-800-376-9992 Fax: (714)985-9221 Web: http://www.maha-comm.com/**

## IC-707 Extra Class Performance, Novice Price!

• 100 W (AM 25 W) • All Mode • Simple to Use! • 500 kHz–30.0 MHz General Coverage Receiver • Minimum Number of Well Spaced Keys • Front Facing Speaker • Large Display • Rugged Construction, Compact Size – Great for Mobile Operation • 100% Continuous Duty Cycle • 32 Memory Channels • **ICOM's Most Affordable HF!** • 13.8 V DC • 9.5"(W), 3.7"(H), 9.4"(D), 9.1 lb

# here comes the sun

***LCD Control Window***

*Use soft key commands to adjust on-screen controls, memory names, filter selections, spectrum scope, and more!*

## IC-756 HF+6M with Adjustable IF-DSP!

• 4.9" Concentrated Information LCD Dot Matrix Display with Spectrum Scope, Alphanumeric Memories and Soft Key Buttons • 100 W Stable Output Power (40 W AM), Continuously Adjustable • SSB/AM/FM/CW/RTTY • Automatic Antenna Tuner • 101 Memory Channels • Automatic DSP Notch Filter • Noise Blanker • PSN Modulation/Demodulation • Selectable Audio Peak Filter • Dual Watch • Twin Passband Tuning • High Performance Memory Keyer • Built-In Electronic Keyer • CW Pitch Control • Double Key Jacks • Triple Band Stacking Register • Voice Synthesizer* • Selectable Pre-Amp and RF Attenuator • PC Programmable with CI-V Capability** • 13.8 V Operation • **Very Affordable Price!** • 13.4"(W), 4.4"(H), 11.2"(D), 23.1 lb

## IC-775DSP Pull Out Those Weak Signals!

• IF-DSP (Digital Signal Processing) Tx/Rx • 200 W Stable Output Power • SSB/AM/FM/CW/RTTY • Built-in Heavy Duty Power Supply • Built-in Auto Antenna Tuner • Automatic DSP Notch Filter • Manual IF Notch Filter • Adjustable IF-DSP Noise Reduction • Level/Width Variable Noise Blanker • PSN Modulation • Audio Peak Filter • Dual Watch • Twin Tuning Knobs • Twin Passband Tuning • Front Panel Switch Control Dual Antenna System • Power MOS FET's • CW Pitch Control • Electronic & Memory Keyer • Front and Back CW Keying Jacks • 1 Hz Tuning and Display • 99 Memory Channels • Selectable Pre-Amp (2 Levels) and RF Attenuator (3 Levels) • Built-In CTCSS Tone Encoder • VOX • Tx Frequency Check • Noise Blanker with Adjustable Level and Width • AGC with Adjustable Time Constant • 16.7"(W), 5.9"(H), 15.4"(D), 36.8 lb

## IC-821H 2M/440 MHz Advanced Satellite & Digital Base Station

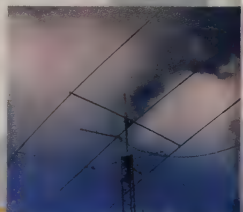
• All Mode • Easy to Use!

• Continuous Adjustable Transmit Power (VHF: 6-35/SSB, 6-45/CW&FM, UHF:6-30/SSB, 6-40/CW&FM) • Sub Band Transmit • 9600 Full Compatibility Out of the Box • 160 Memories • Noise Blanker & IF Shift on Main & Sub Bands (independent main/sub Rx) • Built-In Electronic Keyer • Doppler Correction for Satellite Opperation • Compact Size! 9.5"(W), 3.7"(H), 9.4"(D), 11.0 lb

***No-Code Techs!***
*Work the NEW AMSAT Phase 3-D Satellite!*
*(Due 6/97)*

## don't be afraid

You don't need a big tower to work the HF bands. While large antennas and expensive coax feeds do help to pull in distant HF signals, you can often get more than adequate performance from a simple wire antenna easily strung up the side of a tree or building, or strung between them. Make sure to observe the proper safety procedures. Check with AES for all your antenna needs, big or small.



*Optional equipment required. **Cellular blocked: unblocked OK to FCC approved users.
*** Not all software manufactured for the IC-R8500 may offer each listed capability. ©1997 ICOM America, Inc. The ICOM logo is a trademark of ICOM. All stated specifications are subject to change without notice or obligation. All ICOM radios significantly exceed FCC regulations limiting spurious emission.

# new IC-706MKII†

What puts the MKII in IC-706MKII? 20 watts on 2 meters. Slots for 2 optional crystal filters. Optional tone squelch. Enhanced 0.03 – 200 MHz broadband all mode receive. Sub dial for easier access to RIT/second VFO, Individual band change key. Crossband split. Large speaker. Quiet cooling fan. And more!

†This device has not been approved by the Federal Communications Commission. This device is not for sale or lease, or may be offered for sale or lease, until the approval of the FCC has been obtained.

## take advantage of higher solar activity.

Solar Cycle 23 is here, and with it will soon come exciting, easy worldwide HF listening & DX conditions, day or night –even on 6 meters! Upgrade your license and let ICOM show you how fun HF can be!

Most New ICOM Radios are PC Ready! with select ICOM options

NEW! **IC-706MKII†** HF + 6M + 2M, All Mode Compact Transceiver

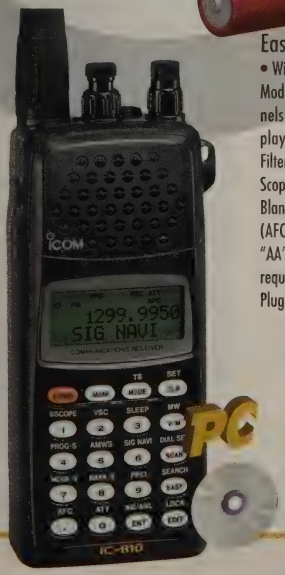
**Easy to Use as a Base or Mobile Rig! Still the World's Smallest HF!**

• HF + 6 M (100 W) SSB/CW/AM/FM/RTTY • 2 M (20 W) SSB/CW/FM/RTTY • Detachable Control Panel Display* • SSB/CW/AM Narrow Filter Options • 101 Alphanumeric Memories • 0.03 – 200 MHz Coverage Rx • Noise Blanker • IF Shift • Preamp/Attenuator • CW Keyer • CW Pitch Control • Full Break-in (QSK) • Speech Processor • VOX • LCD Display with 1 Hz Readout • Easy-to-use Menu System • Tone Encode Built-in • 2 Antenna Connectors • Voice Synthesizer* • **Very Affordable Price!** • 6.6"(W), 2.3"(H), 7.9"(D), 5.5 lb

USES "AA"

**IC-R10** Super-Advanced, Easy to Use Handheld World Receiver

• Wide Band Performance: 500 kHz – 1.3 GHz** • All Mode, Including SSB for SWL's • 1000 Memory Channels with EEPROM • Alphanumeric Dot Matrix Display • 7 Different Scan Types • Tunable Bandpass Filters • Built-In 20 db Attenuator • "Real-Time" Band Scope • Includes an Easy Mode for Beginners • Noise Blanker • Lock • Sleep Timer • Auto Frequency Control (AFC) • Uses 4 Rechargeable "AA" Ni-Cds (included), "AA" Alkalines or Other DC Power Source (optional cable required, depending on DC power source) AC Wall Charger Plug Included • 2.3"(W), 5.1"(H), 1.2"(D), 10.9 oz




**IC-R8500** Next Generation HF/VHF/UHF World Receiver! • Wide Frequency Range: 100 kHz – 2000 MHz** • All Mode • Superior Receive Characteristics • IF-Shift • Audio Peak Filter • Noise Blanker (SSB/AM)• RF Attenuator • 1000 Memory Channels • 13 Different Tuning Steps • 3 Antenna Connectors • S-Meter Squelch (in addition to ordinary noise squelch) • Selectable AGC Time Constant • High Stability (<30 MHz: ±100 Hz, V/UHF: ±3 ppm) • Built-In CI-V and RS-232C Hardware for Advanced Computer Control: *use third party software to boost scanning speeds & memory channel capacity, define search ranges by catagory, set the volume control by channel, use PC keyboard shortcuts to quickly change receiver settings, and more!**** • **Very Affordable Price!** • 12 V DC/120 V AC • 11.3"(W), 4.4"(H), 12.2"(D), 15.4 lb

ICOM®

PC Powered!

http://www.icomamerica.com

# Discover how easy it is to expa

Most New ICOM Radios are

with select ICOM options

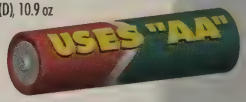
ICOM®

**IC-W32A** 2M/440 MHz Dual Bander • 5W Out of the Box! • No Function Key! • PC Programmable • 200 Memories with Alphanumeric Display, Messaging & Paging • "Intuitive" Help Display • Backlit Display and Keypad • Wide Band Rx (Including Air Band) • V/V, V/U, U/U Operation with VHF/UHF Tuning Knob Exchange • Encode/Decode • PC/Radio-to-Radio Cloning • 2.2"(W), 4.9"(H), 1.2"(D), 12.0 oz

**IC-T7A** 2M/440 MHz Dual Bander • Dual Bander at a Single Bander Size & Price! • Very Easy to Use – No Function Key • 4 W (2M), 3 W (440)@ 13.5 V • "Intuitive" Help Display* • CTCSS Encode/Decode • **Very Affordable!** • 2.5"(W), 4.8"(H), 1.1"(D), 11.3 oz

**IC-T22A** 2M (or **IC-T42A** 440 MHz) Single Bander • Fun, Shirt Pocket Small and Easy to Use! • Large Alphanumeric Display • Wide Rx Coverage • 5 W @ 13.5 V (3 W Out of Box) • Air Band Receive • 80 Memory Channels (40 w/Alpha Display) • 2.3"(W), 4.3"(H), 1.1"(D), 10.9 oz

**NEW! IC-T2A** 2 Meter Single Bander • 4.5 Watts • Rugged Aluminum Chassis & Polycarbonate Case • Built-In Tone Squelch with Pocket Beep and Tone Scan • 8 Programmable Keys • 43 Memory Channels • Uses 8 "AA" Ni-Cds (included) or "AA" Alkalines • Wall Charger Included • **ICOM's Most Affordable Handheld!** •2.3"(W), 5.5"(H), 1.3"(D), 10.9 oz




***Download Frequencies***

*Download up to 40 frequencies from a PC into the IC-T2A, or from one IC-T2A to another. It's a great tool for planning your communications interests ahead of any trip or outing.**

*Optional equipment required. Please call your AES dealer for details. ©1997 ICOM America, Inc. The ICOM logo is a trademark of ICOM, Inc. All stated specifications are subject to change without notice or obligation. All ICOM radios significantly exceed FCC regulations limiting spurious emissions. AESS497Y.1

**actual size!**

Display 2M, 440 MHz, or Air Band – one band at a time. Change bands with a touch of the large blue band key. Even with its ultra-small size, the other IC-207H's keys are easy to work, too. Faceplate dimensions: 4.4 (W) x 1.6 (H) x 1.1 (D)

# hd control of your hobby with PC software

**NEW! IC-207H** 2M/440MHz Dual Bander • 2M (45 W)/440 MHz (35 W) • 182 Memory Channels • Ultra High Scan Speed • Easy Nighttime Operation – Key Labels are Displayed Right on the LCD • Built-In Duplexer • Auto Repeater • RF Atenuator • Wide Band Rx (Includes Airband) • CTCSS Encode/Decode • 4 Selectable Power Levels • Tone Scan and Pocket Beep* • Mounting Bracket Kit Included • **Very Affordable!** • 5.5"(W), 1.6"(H), 8.1"(D), 2.6 lb

***9600 bps Packet Ready***

*A 6-pin connection point on the IC-207H's back panel is provided for packet operation. A third party serial cable is required for PC connection.*

***Full Control Mic***

*Directly enter frequencies straight off the backlit mic. Two programmable function keys allow for easy customizations. Make your communications as simple or as advanced as you want!*

**IC-2710H** 2M/440 MHz Advanced Dual Bander • 2M (50 W)/440 MHz (35W) • Detachable Control Panel* Independent Tuning, Volume, Squelch, and Function Controls • High Speed Scanning • 220 Memory Channel •50 CTCSS Frequencies • CTCSS Encode (decode optional) • 4 Independent VHF/UHF RF Circuits • RF Attenuator • 8 DTMF Memory Channels, 16 Digits Each • V/V, U/U Simultaneous Receive • Built-In Duplexer • 3 Selectable Power Levels • Pager, Code Squelch and External DTMF Control via Sub Band* • Rugged Aluminum Chassis and Quiet Rear Mounted Cooling Fan • 5.5"(W), 1.6"(H), 8.4"(D), 3.1 lb

**IC-2000H** 2M Intermod Fighter! • Wide Band Rx (118–174 MHz) • Highly Intermod Resistant • 50 Watts of Power (50, 10, 5 selectable) Tx 140-150 (for MARS/CAP) • 50 Memory Channels with Alphanumeric Display • AM Aircraft Rx • Message Paging • Call Channel • Busy Channel Lockout • Auto Power Off • DTMF Mic Included • Full/Program Scan • Rugged Aluminum Chassis • **Very Affordable Price!** • 5.9"(W), 2.0"(H), 5.9"(D), 2.4 lb

***Optional Infrared Wireless Mic (HM-90)***

*Works with both the new IC-207H* and the more advanced IC-2710H. Enjoy cable-free operation on the GO!*

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*PC Powered!*

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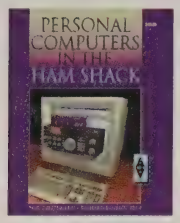
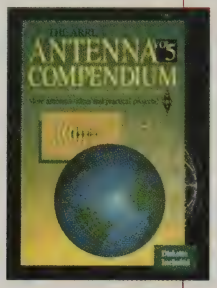
# What's New... From ARRL




### *Personal Computers in the Ham Shack*

Hams and computers, computers and hams—they're all but inseparable these days. Now there's one place to learn how to use your personal computer for all kinds of ham-related tasks: logging and contesting, station control, QSLing and circuit design. Includes a Glossary of Terms and a Resources chapter with references for further information. **$15.95**




### *ARRL Antenna Compendium Volume 5*

The latest in the popular series, a compilation of never-before-published articles on antennas, transmission lines and propagation. Features articles on HF discones, ray tracing, dual-band VHF whip and many more. Includes valuable software.

### *Getting On Track with APRS: A Hands-On Guide to the Automatic Packet Reporting System*

Your one stop for quick-and-easy iinstructions for installing and using the exciting new APRS software. Anyone with a packet station and computer can join the fun. APRS provides a real-time map display of participating stations. When used with a GPS receiver, it is ideal for tracking moving stations. Separate sections cover DOS, *Windows* and MAC platforms. Chapters include custom installation, map-making, harware requirements, and even specialized uses such as direction finding, telemetry and DX plotting. **$14.95**

### *QRP Power*

Whether you've just been bitten by the urge to operate flea power, or you've already discovered just how much fun it is to operate with 5 watts or less, this is the book you've been looking for. It's crammed with projects you can build and resource information you can use. In addition to the best recent QRP-related articles from *QST*, *QEX* and *The ARRL Handbook*, there's a new, in-depth article on NN1G's popular 40-40 transceiver. **$12**

# ARRL CDs

### *QST on CD-ROM*
### *1995 Edition Retail $19.95*

**SEARCH** the full text of every ***QST***, ***QEX***, and ***NCJ*** article by entering titles, call signs,names — almost any word.

**SEE** every word, photo, drawing and table in technical and general-interest features, columns and product reviews, plus images of over 1000 ads.

**PRINT** what you see with any *Windows*-compatible printer or copy it into other *Windows* applications.

### *ARRL Handbook CD 1.0*
### *Retail $49.95*

Features all the text, illustrations and software found in the printed version. Some of the special features include:

- Versatile search capabilities.
- Audio clips of a wide variety of Amateur Radio modes and activities.
- Bookmarks that allow easy return to topics most often used.
- Pages can be printed or saved for use in other ***Windows*** applications.
- Zoom in and out—see the drawings, photos and text enlarged or reduced.
- Hypertext Links to find definitions quickly.

### *QST VIEW CD-ROM*

From the moment ***ARRL Periodicals CD-ROM*** became available, members have been clamoring for more! The ***QST View CD-ROM*** includes back issues of ***QST*** in convenient, space-saving CD-ROM format. Each page—all the ads, articles, columns and covers—has been scanned to provide a black-and-white image that can be read on your computer screen or be printed.

Easy-to-use software included on the CD allows you to:

- **Search for articles by title and author**
- **Select a specific year and issue and browse individual articles or columns.**

Each set of CDs has an index to aid in finding the page or section of the issue you want to view or print.

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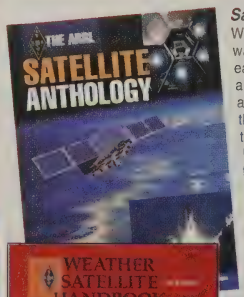
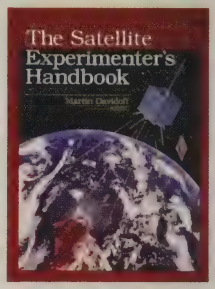
# Satellites and Space



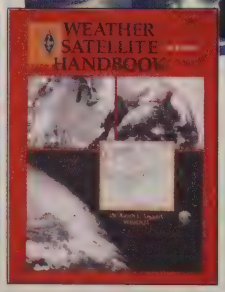

### *Satellite Anthology*, 4th Edition

What will the new f3D satellite *do*, anyway? Which amateur satellites are easiest to use? What equipment and antennas do I need? You'll find the answers—and a great deal more—in this compilation of articles from *QST*, the *AMSAT Journal* and the *World Wide Web*. A perfect introduction to the excitement of space communications! **$12**




### *Satellite Experimenter's Handbook*

Widely recognized as the best book available on the ham satellites, the *Satellite Experimenter's Handbook* has the information you need to get on or enhance your enjoyment of the amateur satellites. You'll find an immense store of valuable data on the active satellites, plus a history of the amateur space program, ground station equipment and antennas, orbits, tracking, weather and TV satellites, and more. **$20**




### *Weather Satellite Handbook*

A popular and easy-to-use reference for anyone interested in viewing our world from space. The revised and expanded 5th edition features an interface project that allows you to capture fascinating images from various weather satellites and HF WEFAX broadcasts (a kit is available). You'll learn how weather satellites function, how to build or modify your own receiving equipment and how to buy or build the right antennas. **$20. Companion software** (revised for the 5th edition of the book) available **for IBM PCs** and compatibles. **$10**

# World's First HF Rig with CW Auto Tune and DSP Built-in

Kenwood makes Digital Signal Processing technology available to everyone with the all-new TS-570D and TS-570S. Imagine a DSP radio that you can operate in the shack, the car, or on a remote DX island. These are the first DSP rigs that meet the needs of today's HF operator within a budget. From the first moment that you hear the incredibly clear and powerful audio and operate the new, common-sense ergonomic design, you will realize the TS-570D or TS-570S is the HF rig built for you.

The TS-570D and TS-570S offer the world's first CW AUTO TUNE feature which enables automatic zero-beating for CW operation. Advanced Kenwood design and features coupled with traditional Kenwood HF performance make the TS-570D/570S a masterpiece that you can proudly operate. If you have been waiting for a new DSP HF radio with performance at an affordable price, wait no more.

- **The RCP-2 Radio Control Program also allows the HF operator to design and program multiple radios with custom settings while conveniently saving them to a PC file for future use.**

**Large LCD display** features a 4-stage dimmer while the **7-digit alphanumeric sub-display** provides menu mode guidance, split frequency display and digital filter selection options. Easy-to-read **S/PWR/COMP/SWR/ALC** meters and an operating guidance feature help to greatly simplify operation.

**16-bit DSP technology** delivers superb audio quality on both transmit and receive. **Noise reduction** (line enhancer method and SPAC), **audio equalization** (voice/transmit equalizer and speech processor), **slope tuning** and **automatic IF filter bandwidth selections** can be operated with a touch of a button.

**Power output** can be set between 5 ~ 100 watts in 5 watt increments. 5 watt setting is ideal for QRP operation.

**Preset auto antenna tuner** with 22 sub-bands from 1.8 MHz - 30 MHz including 6M and memory for both antenna ports.

**10-key direct frequency entry**

**World's first CW Auto Tune** enables automatic zero-beating for CW operation.

**Quick memory** provides five channels for on-the-fly frequency control: **M.IN** stores data, **MR** recalls it.

**Electronic keyer** provides speed settings of between 0 and 100 wpm and dual key inputs on the back – one for the paddle and one for the key.

**Menu system** offers 46 types of functions to assist novice thru extra class operators.

**A wealth of scanning capabilities** enhance operability. Scan speed is variable and can be set for time-based or carrier-based resume. Scanning can work across channels, groups of 10 channels, all except locked out channels, or it can be programmed to scan a frequency range between two channels.

• Mobile/fixed station size (10-5/8 x 3-3/4 x 10-11/16 in) • Heavy-duty design • CW message memories
• CW reverse mode • Full break-in and semi break-in • High-speed 57600 bps PC control • Dedicated packet port

## TS-570D / TS-570S

**HF Transceiver** **HF + 6M Transceiver**

With a half century of engineering and design experience to draw upon, Kenwood is changing the future of HF communications technology. High quality TX-RX audio reproduction with extremely effective DSP interference reduction delivers pleasing performance to your ear and over the air. You will also enjoy the large, easy-to-read LCD display with a built-in on-screen operator guidance system for simple operation. Features like 10-key direct frequency entry with new "soft-touch" keys, auto-antenna tuner, 100 to 5 watt for QRP operation, variable scanning speed, built-in CW keyer, ANT 1-ANT 2 ports, IF shift control, RS-232C com-port, 100 memory channels, CW reverse, optional VS-3 voice synthesizer and DRU-3A digital recording unit make the TS-570D or TS-570S the radio for you.

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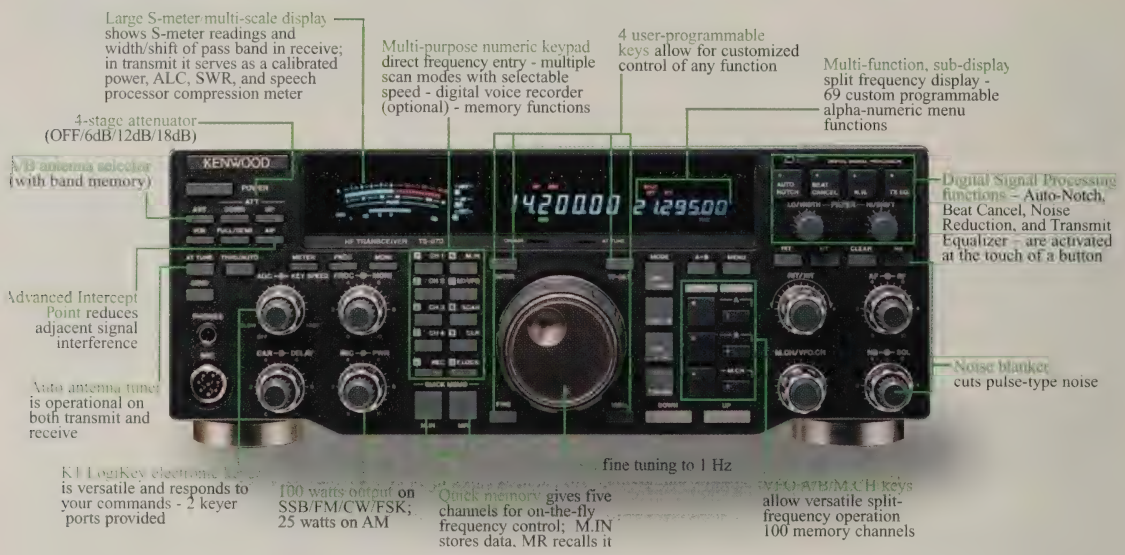
6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

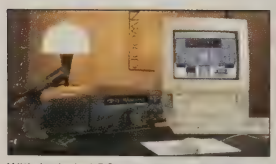
# True IF-Stage DSP + Computer Programmability

The TS-870S provides a new level of HF performance. You can now pick out weak signals you've never heard before. True IF-Stage Digital Signal Processing is achieved using two 24-bit 20MIPS (Million Instructions Per Second) Motorola DSP chips providing an impressive dynamic range of 144 dB. Analog data is processed via a 10,000+ gate array device converting analog signals to digital information with amazing CW characteristics and SSB audio clarity. By capturing the signal at IF frequencies and applying complex algorithms according to personal configuration parameters, you can achieve filtering that is *simply impossible with an analog circuit.* Enjoy filtering sharp enough to attain over 100 dB out of band attenuation with virtually no signal loss. Imagine 70 nanosecond access time ROM devices and SRAM designed with an astonishing 25 nanosecond access time, makes the TS-870S in a class by itself for rejection of QRM and QRN. Kenwood's IF-Stage DSP design *eliminates the need for additional expensive and inferior analog filters.* The TS-870S let's you easily adjust the filtering system to meet your personal taste and requirements eliminating signal loss and "ring" found with conventional analog filters. All this is achieved by using Kenwood's easy to use menu system and Radio Control Program software that is included. Any operator can custom design multiple radios (CW, DX, RTTY, Packet, or Ragchewing), and save to a file for future use. The TS-870S has no competition, check for yourself.




## TS-870S
### HF Transceiver

Investing in a new HF transceiver is a serious decision. Kenwood has produced a clear and easy to understand, In-Depth TS-870S manual. It's yours for the asking! In our continuing role as a technology leader, Kenwood is proud to offer the TS-870S IF-Stage DSP Transceiver. The TS-870S has a full array of smooth operating features including, general coverage RX 100KHz-30MHz, full-function electronic keyer, dual antenna terminals, TX-RX auto antenna tuner (160-10M bands), auto notch, beat cancel, transmit equalizer, noise reduction, all active within the DSP processors. The TS-870S filtering system allows selectivity down to 50 Hz on CW without ringing or signal loss. Optional features like a Digital Recording Unit (DRU-3) and Voice Synthesizer (VS-2) are also available. TS-870S is truly in a class by itself.



With included PC software, build different radios on screen and save all your functions and settings to a file for future use.

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Meets ISO Manufacturing Quality System

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# New, Cool and Blue!

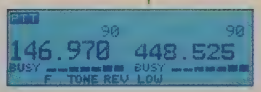
## TM-V7A Dual-Band Mobile

Kenwood continues its renowned dual-band mobile tradition with the revolutionary TM-V7A. Large, cool-blue reversible LCD, ergonomic control panel, 280 memory channels, and computer programmability are just some of the many exciting features. Kenwood's engineering expertise, advanced design reputation and outstanding quality are amply evident in the fun-to-operate TM-V7A dual-band mobile transceiver.

- **Alphanumeric memory capability allows you to recall up to 180 memory channels by name. Frequency, memory channel number, and name (up to 7 characters) are displayed simultaneously. Store call signs, repeater names, cities, etc.**

# TM-V7A

### FM Dual Bander




Performance, quality, and innovation briefly describe the new TM-V7A dual-band mobile. Look at the easy-to-read large blue LCD display! Storing all of your favorite frequencies is a snap with 280 memory channel capacity (alphanumeric to 180). Unique programmable memory function allows you to store virtually all operating data such as frequency, offset, DTSS code, display setting, and beep function in 5 special channels. Visual scan allows you to graphically see band activity near the current operating frequency. Other features include a user-friendly menu and guidance system, 1200/9600 bps packet, AM aircraft band receive, CTCSS, DTSS, paging, backlit DTMF microphone, detachable control panel (with cable option), and voice synthesizer (VS-3 option). The TM-V7A is truly in a class by itself.

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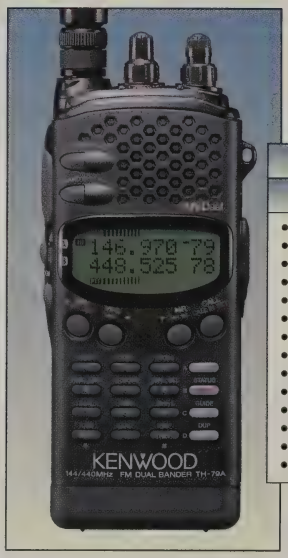
# The Ultimate Choice in Amateur Radio

## TM-261A

**FM Mono Band Mobile**

- 144 MHz operation
- 62 memory channels
- 6 character alpha-numerics
- DTMF memory for autopatch
- 50 watts output power
- Multi-scan capability
- Backlit microphone
- MIL-STD 810C and 810D
- Dual menu system
- Repeater reverse switch
- DTSS selective calling
- Built-in CTCSS encoder
- Wireless cloning

"Super! I can use alphanumeric memories to store names, call signs, and repeaters on my TM-261A."




## TH-79A(D)

**FM Dual Bander**

- 144 MHz / 440 MHz operation
- Dual receive on 2 bands
- Dot-Matrix LCD display
- 7 character alpha-numerics
- 82 memory channels
- Operator's Guide function
- DTMF memory for autopatch
- Wireless cloning
- PC programmable
- MOS FET power module
- High performance antenna
- CTCSS encode/decode
- Remote control feature
- Airband receive

"Great! My TH-79A(D) receives on 2 bands at the same time. Comes in a 5W version too."

## TH-22AT

**FM Mono Bander**

- 144 MHz operation
- User friendly operation
- 40 memory channels
- Compact rugged design
- DTMF memory for autopatch
- MOS FET power module
- Direct DC input
- Luminescent DTMF keypad
- Multiple scan modes
- Auto battery saver circuit
- Built-in CTCSS encoder
- Battery voltage indicator
- 3 or 5 watt versions

"Outstanding! Loud, clear audio and easy to use."

Kenwood is known worldwide for outstanding products. With over 50 years of design, engineering and manufacturing experience, it is easy to see how Kenwood sets itself apart from the competition. In the world of Amateur Radio, Kenwood has a strong and rich heritage based on one simple truth. We do our very best to build the best. Kenwood Amateur Radios not only have the look of a well designed and manufactured product with a superior "quality feel", but also have the same world famous Kenwood reputation on the inside. Now surprisingly affordable!

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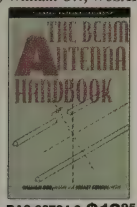
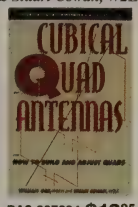
## POPULAR ANTENNA BOOKS

*by William Orr, W6SAI & Stuart Cowan, W2LX*




RAC 08704 2 **$13.95**




RAC 087034 **$13.95**

RAC 087107 **$13.95**

RAC 087077 **$13.95**

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**Pocket REF**

Updated or vastly expanded sections. Now 544 Pages! Chapters on air and gas, carpentry, chemistry, computers, electricity, math, hardware, plumbing, steel and materials surveying, welding, general information and more. Too many to mention! 100's of tables & charts, 1000's of conversions. Just about everything that you need to know!..... **$9.95**

**Pocket PCREF**

A concise PC computer reference. 544 pages of hard to find information on IBM PC's – ASCII Codes; Numeric Prefixes; Video Standards; Decimal/Hex Conversions; Printer Codes; PC Error Codes; I/O Pinouts; PC Memory Maps; Address Maps; Modem Commands & Switch Settings; Scan Codes; Floppy Drive Types; CPU Types; DOS History, 3500 phone numbers..... **$14.95**

## POPULAR DIGITAL BOOKS

**The Digital Communications Handbook**

Experienced or beginner, this handy guide has all the information you need to stay on top of the latest developments in radio digital communications. Covers CW, ASCII/RTTY, FSTV, SSTV, Baudot RTTY, AMTOR, Packet & FAX..... (TAB 633626) **$14.95**

**Your Packet Companion**

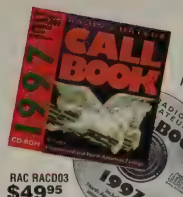
Written for the beginner! Essential topics: Assemble your own packet station; Use your computer/terminal to chat with other packeteers; Get the most out of packet bulletin boards; Send & receive packet mail; Hunt DX with *PacketClusters;* Use amateur packet satellites; Explore advanced networking systems – ROSE, TexNet & TCP/IP..... (ARR 358) **$8.00**

**Your HF Digital Companion**

Topics: Assemble your HF digital station; Use digital modes to talk to amateurs throughout the world; Compete in contests; Hunt for digital DX; Work mailbox and bulletin board systems; Explore new HF digital modes like G-TOR ..... (ARR 361) **$10.00**

**KANTRONICS G-TOR™ BOOK**

*The New Mode* – a valuable collection of previously-published articles, a detailed description of the G-TOR protocol and informational numerous charts. Written primary by Kantronics staff Phil Anderson, WØXI, Karl Medcalf, WK5M & others..... **$19.95**




## Radio Amateur Callbook CD-ROM-1997

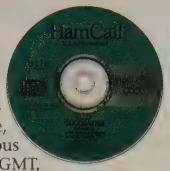
RAC RACD03
**$49.95**

Access Callsigns, Names and Addresses of more than 1.3 million listings world-wide covering more than 250 countries, islands and dependencies. Includes North American and International listings.

**FEATURES**

- Includes country names, date of birth • QSL Manager listings
- Print program with multiple entries to customize a mailing label or logging format; contesters can record callsigns and automatically print custom fields for labels or QSL addressing.
- Windows/DOS platform for US & International data retrieval
- Windows icon driven by mouse & DOS via menu
- Data display by callsign, last name, city, license class issue & expiration date • Morse code sound output to PC speaker
- Search U.S. stations by callsign, last name, county, city & zip
- Search International data by callsign • Text search by name, street, city, province or region
- Text search of clubs, then and nows, military & silent keys
- US data includes time zones, latitude/longitude & area codes

## BUCKMASTER




**HamCall CD-ROM for MAC and IBM PC Compatibles**

Look up over a million listings by Call, Name, Address, City, Zip, Call sign suffix and country. Plus, license issue date, expiration, birth date, previous call, area code, hours past GMT, previous class, and new high-precision latitude, longitude, and grid square. Retrieve by Callsign, Name and zipcode on MacIntosh..... **$50.00**

*Other features:*

**Windows 95 Compatible • Extensive international listings • Print standard 1-up labels • Hundreds of programs & data files of ham related subjects • Over 40 MB or MAC software. Over 1000 text files • Interfaces with many popular logging programs • Photos now added to license information**

## WALNUT CREEK

**QRZ! Ham Radio CD ROM • Vol. 8**

Brings 985,985 callsigns from stations around the world to your fingertips. Full database listings are included for Austria, Brazil, Canada, Cuba, Israel, Italy, Mexico, Monaco, Portugal, Turkey, and the U.K. The USA database includes latest FCC listings.

Designed for Windows 95 with compatibility with Windows 3.1, NT, MSDOS, Macintosh, OS/2, SunOS, Linux, NeXT, AIX, HP/UX, SCO and IRIX

**QRZ! Ham Radio CD ROM includes:**

- 985,985 callsigns
- Internet E-mail addresses of over 51,000 hams
- Over 3,000 PC Amateur Radio Programs
- TARRI info files and bulletins
- Morse Code Training Software, Radio and scanner MODs
- TCP/IP packet radio BBSs, satellite tracking
- On-line FCC exam training
- Computer radio control programs
- Contest logging software
- Digital QSL cards with built-in image viewer
- RTTY, WEFAX, Rose, TheNET, DSP files
- .WAV files for TNC testing
- Sample callbook source in C and .DLL API library
- Support for RBBS, Opus, PC Board, Spitfire, Maximus, and Wildcat BBS software

**$29.95**

## ARRL Repeater Directory

Includes more than 20,000 listings for voice and digital repeaters and propagation beacons located in North, Central and South America. Lists more than 500 beacons from 14 to 24 GHz, band plans, tone chart, committees, clubs & more!

(ARR270) **$8.00**

- Amateur Bands
- Marine Bands

## SG-2000 COMMERCIAL GRADE HF TRANSCEIVER

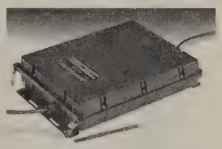
A rugged HF transceiver with 150W PEP output. Modes: A3A, A3H, A3J and CW in LSB/USB, true AM in receive mode & Data. Comes programmed with 644 ITU channels and 100 user defined channels that can be set to Ham frequencies in the 1.8–30 MHz range; receives 500kHz-30MHz. Keypad control with 21 illuminated keys. Scans ITU channels and 100 memories with adjustable scan speeds/rates. Large LCD, wide-angle display, adjustable back lighting for easy viewing night or day. Operates as a single unit, or the front panel can be removed to function as a remote control head. Built-in computer control capability, can be controlled by any standard RSS-232 protocol on all Digital Modes. 12VDC @ 16A. 4¾"h x 10"w x 15"d, 12 lbs .... 04-01 **$1429.95**

**SG-2000 w/DSP**

**"The PowerTalk™**

The SG-2000 with advanced ADSP & SNS technology and a slim state-of-the art control head. PowerTalk™ greatly improves signal clarity and reduces noise, resulting in extremely high quality HF signals. Bright red and green LED's indicate tuning of high-low-center frequencies. Preset/User Programmable memories allow quick recall of ADSP and, SNS, and high-low-center, and notch filter settings. 644 ITU and Ham frequencies including SITOR/AMTOR/PACTOR telex channels in permanent memory, plus 100 user-programmable channels. 150W output. 12VDC @ 16A. 4¾"h x 10"w x 15"d, 12 lbs ..... 04-23 **$1899.95**

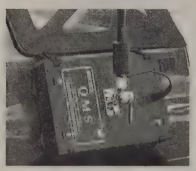
**SG-230**



**The Smartuner®**

An automatic antenna tuner capable of tuning any length antenna from 8 to 80 ft. long within the 1.8–30MHz frequency range; 160M requires 8 ft., minimum. Operates with low power, it even tunes up on an SSB signal; rated up to 150W. A microprocessor controls the switching of 64 input & 32 output capacitor combinations, plus 256 inductance combinations in a pi-network to tune an antenna in just two seconds. 500 memories store previous tuning combinations to tune in milliseconds. Waterproof for marine operation. 10–15VDC @ 0.9A. 12"w x 16"d x 3"h, 8 lbs..... 54-12 **$489.95**

**QMS**




**Antenna Tuner System**

A SGC *Smartuner®* automatic coupler, SG-303 9 ft. extended full range antenna, and a special exterior waterproof mounting package. It's unusual, but it gives any mobile operating in the 1.8–30MHz range with up to 150W, an almost unbelievable improvement in reception & transmitting range (3-20dB). Mounting the tuner on the outside reduces engine noise and eliminates lossey wire runs between the antenna and tuner. It attaches to vehicle using high suction devices and nylon webbing – a rugged installation without holes. 18"w x 12"d x 5"h, 24 lbs..... 55-47 **$895.95**

**SG-500**

**SmartPowerCube™**

Fully automatic bandswitching, microprocessor-controlled HF Linear Amplifier for 1.6 to 24MHz operation.

*See the Amplifiers Page*

# HF–VHF SMARTUNER™

## 1.0-60 MHZ ◆ 100 WATTS

## SG-231 HF-VHF SMARTUNER™

*A smart, slim version of our intelligent Smartuner antenna coupler*

- Complete frequency agility with no operator intervention
- Continuous coverage of 1-60 MHz with almost any antenna
- Compact design, fits the most restrictive installations
- Weatherproof case allows mounting at antenna feed point for highest efficiency

The SG-231 uses a microprocessor controlled pi of L network to match virtually any load to your transceiver; with the SWR always 1:1.5 or better. Tuning solutions are stored in a non-volatile memory for fast (10ms) automatic recall! Operates with any HF or VHF transceiver, 3 to 100 watts, and requires only 12VDC and RF connections.

The SG-231– *designed for any radio application* – a smart addition to SGC's Smartuner series, and a smart choice for your next antenna coupler. Call SGC or your radio dealer to order yours!

SGC

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MADE IN USA

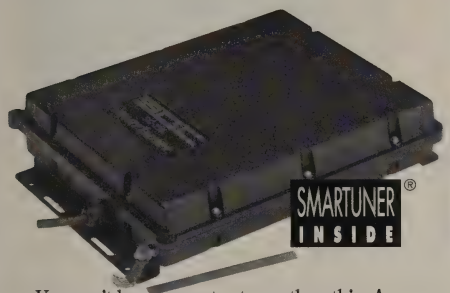
SGC Inc., SGC Building, 13737 S.E. 26th St. Bellevue, WA. 98005 USA
P.O.Box 3526, 98009 **Fax:** 206-746-6384 or 746-7173 **Tel:** 206- 746-6310 or 1-800-259 7331
**E-mail:** SGCMKTG@aol.com **World Wide Web**: sgcworld.com

# BUY SMART

## SG-230 Smartuner®

Antenna Coupler

SSB, AM, CW & DATA




You can't buy a smarter tuner than this. An automatic antenna coupler so intelligent it precisely tunes any length antenna –8 to 80 ft–in the HF band.

The Smartuner® automatically evaluates and switches 64 input and 32 output capacitance combinations, plus 256 inductance combinations in a "pi" network. The amazing result is over a half-million different ways to ensure a perfect match for your transceiver. And the most intelligent feature of all is that the Smartuner remembers the chosen frequency and tuning values, and will automatically reselect those values –in less than 10 ms, each time you transmit on that frequency.

The SG-230 Smartuner.® Buy smart.

MICROPROCESSOR CONTROLLED • NON-VOLATILE MEMORY • WATERPROOF B.I.T.E. INDICATOR • 1.8 TO 30 MHZ RANGE • 10 TO 150 WATTS INPUT POWER 10mS RETUNING TIME • 8 to 80 ft. ANTENNA (all types)

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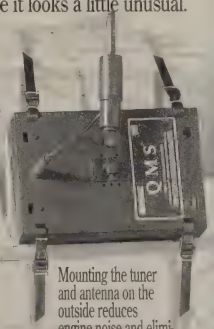
# OWN THE WORLD'S BEST FOUR-WHEEL-DRIVE BASE STATION

Add a QMS Antenna Tuner System to your SSB.

The QMS is an SGC Smartuner® automatic antenna coupler, an SG-303 extended full-range antenna, and the special exterior—waterproof— mounting package, all in one.

The QMS is that large box strapped to the side. We admit, at first glance it looks a little unusual. But once you use it, you'll find an almost unbelievable jump in reception and transmitting range (3-20 db). The QMS makes a typical HF-SSB perform like it's never performed before. Match it with a cutting edge SGC HF-SSB and it will blast holes through major mountain ranges and probably some laws of physics. Power and focus are everything in HF-SSB ham rigs. Buy this and own the best base station on–or off–the road.




Mounting the tuner and antenna on the outside reduces engine noise and eliminates power-draining antenna wire runs between the antenna and tuner.

QMS. It's the look of focused power.

**LEARN TO LOVE THE LOOK**

SMARTUNER® INSIDE

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# Couple to 500 Watts

SGC SG-235 SMARTUNER

SmartTuning—Now at 500 watts. Now you can achieve perfect coupling of your 500-watt HF-SSB to your antenna. Go **mobile** at **500 watts**!

The SG-235 Smartuner "intelligently" tunes any length antenna from 23 feet! No preliminary tuning or adjustment is required and the SG-235 will operate with any HF transceiver in the 1.8 to 30 MHz range and with output power from 3 to 500 watts.

Automatically the SG-235 Smartuner evaluates and switches 64 input and 32 output capacitance combinations plus 256 inductance combinations in a "pi" network—over a half-million precision matches. The SG-235 Smartuner then remembers the chosen frequency and tuning values and automatically reselects those values—in less than 10 ms, each time you select that frequency. Flexibility is a key feature with its attractive options, including 24 VDC.

- Microprocessor Controlled
- Non-Volatile Memory
- Waterproof for All Weather
- Built-in Test Equipment Indicator
- 1.8 to 30 MHz Range
- 3 to 500 watts Input Power
- 10-mS Retuning Time

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# BRAIN POWER

SGC SG-500 SMART POWER CUBE

**Microprocessor Controlled Linear Amplifier: 1.8 — 24 MHz**

The SG-500 SmartPowerCube produces tremendous power—nearly as much as a 1000W amplifier. Yet it requires less than one cubic foot of space. Electronic brain power makes this possible. The SG-500 is an intelligent—microprocessor-controlled—high power linear amplifier, designed with high efficiency transistors. Its electronic brain constantly monitors your HF-SSB's activities, power needs, and antenna condition, and automatically—in less than 15 milliseconds—selects the right broadband filter.

It's designed to perform reliably and essentially unattended, in the most demanding conditions. For maximum power—intelligent power—at low cost, the SG-500 Smart Power Cube is just the amplifier that you need.

Power Output:
SSB: 500 watts PEP
CW: 500 watts 10 min. (no fan)
500 watts unlimit ed with fan
AM: 250 watts carrier max.
Band Switching: fully automatic
Protection: Input overdrive, over current, over temperature
Domestic: 1.8—24 MHZ

**CALL AES® TODAY!**

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# HEAR in the CLEAR

**SGC PowerClear™ "Add-on DSP"**

SGC's new PowerClear™ uses the power of advanced **Digital Signal Processing** to clear noisy, interference-plagued audio.

Mates with any HF SSB unit. Reduces noise and interference from virtually any audio source—HF, VHF/UHF transceivers, scanners, shortwave receivers, micro-wave, and telephone lines.

PowerClear attacks noise and heterodynes with advanced DSP algorithms and lets you tailor bandpass response to your individual need—separate adjustments for low and high cutoff as well as audio bandpass shift.

Cut through the noise with factory preset filters and with up to seven combinations of your choice. The bright red and green LEDs quickly show your selected filter adjustments. Only 3.65" high!

Hear more with SGC's PowerClear. Call your nearest AES® branch now for details.

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# POWERTALK™

## Stunning HF-SSB Receive Clarity With SGC DSP.

With SGC's new PowerTalk™, you'll intercept weak HF signals, increase signal clarity and eliminate unwanted noise. You'll hear SSB signals clearer and easier than ever before. PowerTalk™ combines the advanced receiver technology of SGC's exclusive ADSP™ (Automatic Digital Signal Processing) and SNS™ (Signal Noise Subtraction). Fast audio *and* visual tuning—a DSP command center with a high performance spinner knob and bright LED indicators. Plus all the outstanding features of the popular SG-2000: 644 ITU and ham frequencies, programmable memory, large LCD display and 150 watts of power out. PowerTalk™ is a true HF-SSB Power Tool. We have all the details. Call us *and hear more.*

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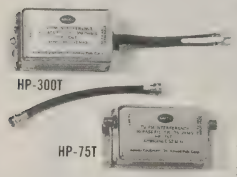
## AMECO ACCESSORIES BOOKS CODE COURSES

**PT-3 Preamplifier** Covers 160 thru 6 meters, useable with either a receiver or transceiver. Tunable low noise dual gate FET circuit provides more than 20dB gain with low noise figure and improved spurious and image rejection. RF sensed switch with variable delay automatically bypasses to the antenna on transmit. Second receiver and antenna capability. 12V DC. use P-12T ($9.95) 2½"h x 8¾w x 6¼"d ..... **$119.95**

**TPA Tunable Preamplifier & Active Antenna** Use as a preamplifier to improve the gain of a receiver, or as an indoor active antenna. Covers 0.22 to 30MHz in 5 bands. A dual-gate FET device provides an excellent noise figure and over 20 dB gain. As a preamplifier, the input matches most antennas; long wire, 300Ω and random lengths. When no external antenna is available, the preamplifier's built-in 30" collapsible whip gives excellent results. Uses 9V battery or PT-9T AC adapter ($9.50). 1½"h x 8"w x 6½"d ..... **$69.95**




**High Pass Filters** stop TV, FM and VCR interference caused by harmonics or overload from HF amateur radio transmissions, etc. Installs at TV or VCR antenna terminal. or connector. Sharp frequency cutoff at 52MHz with 70dB attenuation below 50MHz. Models for 75Ω or 300Ω TV antenna lead-ins or 75Ω cable systems.

**HP-300T** (300Ω) • **HP-75T** (75Ω) ..... each **$12.95**

**OCM-2 Combination Code Practice Oscillator & CW Monitor** Volume control, 3" speaker, and headphone terminals. Requires a code key and a 9V battery.

**Kit $19.95 • Wired $24.95**

**K-1** Low-cost general purpose key with phenolic base, adjustable tension and contact spacing..... **$9.95**

**K-4** Deluxe high quality key. Polished brass base, shorting bar ..... **$14.95**

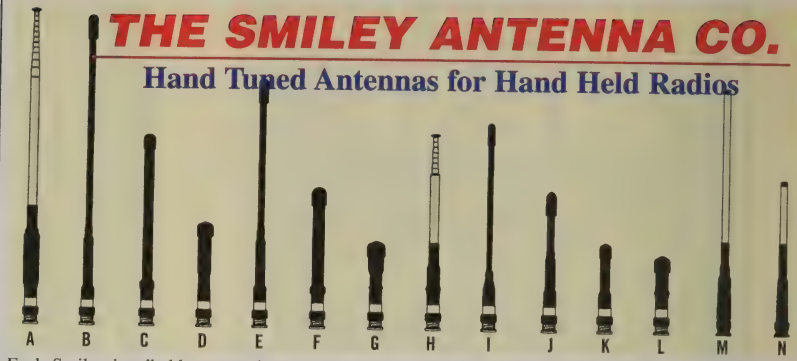
**FCC Test Manuals** New revised editions Incorporating all of he latest changes in the FCC amateur radio test preparation requirements. Separate manuals are available for all license classes including the No-Code Technician. All current FCC examination questions for each class, with corresponding multiple choice answers.

More AMECO products... see Price List & Index

**107-PC-2** The complete Morse Code Instructor for IBM PC/XT/AT or compatible. Menu driven–over 18 options, on-line "help" screens. Generates random characters, numbers, punctuation & QSO's. Similar to FCC/VEC exams Ideal for the beginner ..... **$29.95**

## THE SMILEY ANTENNA CO.

### Hand Tuned Antennas for Hand Held Radios




Each Smiley handheld antenna is individually hand tuned to resonance at band center under normal operating conditions. (No ground plane – No radials). Manufactured from the finest heat-treated copper plated spring steel coils. Cold rubber compound is used for coil insulation and a neoprene heat-shrink coating applied for strength and endurance. All have BNC connectors.

**THIN STICK** 1/4 wave telescoping dual band antenna for 144 and 220MHz bands ..... (TS) **$16.95**

**SUPER STICK II (A)** 2 meter, 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain fully extended (54"); usable fully collapsed, or one section 1/4 wave. Length: 54" extended, 10" collapsed ..... (SS-II) **$19.95**

**SUPER STICK II COMBO** As above but includes a 2 meter Stubby Duck antenna (D) ..... (SS-II/COMBO) **$26.95**

**5/8 SLIM DUCK (B)** 2-meter, 5/8-wave, 7db gain, flexible base loaded antenna. 12" long ..... (5/8 SLD-2) **$17.95**

**5/8 SLIM DUCK COMBO** As above, but includes a 2 meter Stubby Duck antenna (D) ..... (5/8 SLD-2 COMBO) **$24.95**

**REGULAR DUCK (C)** For 2 meters. Tuned Ducks show a 3db gain over other Rubber Ducks because they are impedance matched for hand-helds. ..... (RD-2) **$14.95**

**STUBBY DUCK (D)** Tuned, efficient, for 2M ... (RDS-2) **$14.95**

**SUPER STICK III** 220MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain extended; usable collapsed, or a one section 1/4 wave. 36" extended, 8¾" collapsed (SS-III) **$19.95**

**SUPER STICK III/COMBO** As above but includes a 220MHz Stubby Duck antenna (G) ..... (SS-III/COMBO) **$26.95**

**5/8 SLIM DUCK (E)** 220MHz, 7db gain, flexible base loaded antenna. Length: 9" ..... (5/8 SLD-220) **$17.95**

**5/8 SLIM DUCK COMBO** As above, but includes a 220MHz Stubby Duck (G) ..... (5/8 SLD-220 COMBO) **$24.95**

**REGULAR DUCK (F)** Tuned for 220MHz ..... (RD-220) **$14.95**

**STUBBY DUCK (G)** Tuned for 220MHz ..... (RDS-220) **$14.95**

**SUPER STICK IV (H)** 440MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain extended; usable collapsed. 18" extended, 5¾" collapsed..... (SS-IV) **$19.95**

**SUPER STICK IV COMBO** As above, but includes a 440MHz Stubby Duck (K) ..... (SS-IV/COMBO) **$26.95**

**SLIMLINE (I)** 440MHz, 1/4-wave flexible ant ... (SL-440) **$12.95**

**5/8 SLIM DUCK (J)** 440MHz, 7db gain, flexible base loaded antenna. Length: 5" ..... (5/8 SLD-440) **$17.95**

**5/8 SLIM DUCK COMBO** As above, but includes a 440MHz Stubby Duck (K) ..... (5/8 SLD-440 COMBO) **$24.95**

**STUBBY DUCK (K)** Tuned for 440MHz ..... (RDS-440) **$14.95**

**MINI DUCK (L)** Tuned for 440MHz ..... (RDMD-440) **$14.95**

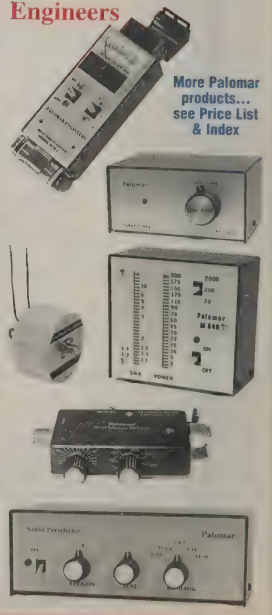
**FLEX-COIL (M)** 2 meter, 1/2-wave, 7-9 dB gain, flexible base 35" fully extended ..... (FLX 1/2 WAV2M) **$25.95**

**270A (N)** Telescoping 2m/440 gain antenna. 1/4-wave (2m) 5/8-wave (440 MHz) ..... **$19.95**

**TAQ** 1/4-wave whip, specify 2M, 220 or 440MHz ..... **$10.95**

*There's a Smiley for your every need!*

## PALOMAR Engineers



More Palomar products... see Price List & Index

**PCM-1 RF Current Meter** • Measures RF current, 1–30MHz. Clamp-on design allows you to check: Radial systems to find broken radials; Antenna and feedline currents; Currents on coax shields and any wire up to 1/2" diameter. Three Ranges: 100ma, 1 A & 5A full scale. Handheld, 9V battery operated for use right at your antenna. 6"w x 2"h x 2"d, 9 oz. ..... **$129.95**

**PT-340 Tuner-Tuner** • Eliminate QRM, overheated final tubes and devices by adjusting your station antenna tuner without transmitting. Installs permanently between rig and antenna tuner. Turn it on, and listen to the noise output in your receiver, adjust your station tuner for a dip in the noise (null). Covers 1.7 to 30MHz. Uses 9V battery. 6"w x 5"h x 3"d ..... **$99.95**

**M-840 SWR & Power Meter** • Two 30-segment LED displays show PEP or average power & SWR instantaneously and simultaneously, without calibration – just select the proper power range. Covers 1 to 30MHz with 2, 20, 200 and 2000 watt power ranges. Shows VSWR 1.0 to 10:1+. Remote sensor with 6 ft. cable. Requires 10-15 VDC @ 800ma. 4¾"w x 4¾"h x 2¼"d, 1 lb. **$189.95**

**RX-100 Noise Bridge** • Just one measurement tells if your antenna is resonant, and if not, whether it is too long or too short. Shows resistance and reactance of coax fed antennas in the 1–100MHz range. Installs between receiver and feedline. Just tune receiver to frequency and adjust controls for a noise null and interpret the readings according to instructions. Useful for off-the-air tune-up of transmitters and tuners, and to adjust tuned circuit resonance. Uses 9V battery. 5¾"w x 3"d x 1¼"h ..... **$89.95**

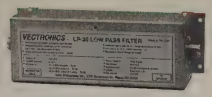
**SMB-5 Software program for AT-compatible computers** • Uses RX-100 noise bridge readings taken at the transmitter to compute and plot antenna resistance, reactance & SWR. 3-1/2" disk with manual ..... **$29.95**

**SB-4 Balun** • Matches 50Ω unbalanced coax to 200Ω balanced line. For high SWR applications in multi-band dipoles, tuners and open wire line to coax transformations. Covers 1.7–30MHz range, rated for 6KW PEP or 2KW CW up to a 10:1 SWR. Teflon insulation, epoxy encapsulated, stainless steel eyebolt on top for support. 4" diameter x 4" high, 2 lbs ..... **$89.95**

**P-508 Active Preselector** • Installs between a receiver and antenna system. Covers 200kHz–30MHz range. High-Q tuned circuits reduce or eliminate interfering signals on the shortwave bands. New FET-Bipolar amplifier provides over 20dB gain and tolerates strong local signals without overload far better than older dual-gate technology. 9-15V DC. SO-239 connectors. 2½"h x 7¼"w x 2½"d, 0.8 lb ..... **$99.95**

# VECTRONICS Amateur Radio Products

LP-2500


LP-30

## TVI FILTERS

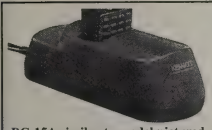
**LP-30 Low Pass Filter** Suppresses TV interference from HF transmitters operating below 30MHz. Use between transmitter and the antenna or tuner to provide up to –70dB attenuation of harmonics that fall within the TV bands. For 52Ω coaxial systems, up to 30MHz, rated 1500W continuous ..... **$49.95**

**LP-2500** Rated for 2500W continuous RF.... **$74.95**

**HPF-1 High Pass Filter** Installs at the TV set antenna terminals to reduce television interference caused by overload and harmonics from HF transmitters operating below 30MHz. High harmonic attenuation with low loss in the 52–550MHz TV passband. Unique shield-breaking circuit prevents antenna cable from acting like an HF antenna. For 300Ω balanced system but also comes supplied with baluns with Type F connectors for 75Ω coaxial lead-in..... **$19.95**

## DUMMY LOAD

**DL-300M Dry Dummy load** Simulates an accurate 50Ω antenna up to 150MHz. test your transmitter without radiating a signal on the air. Power handling curve is rated at 300 watts for 15-seconds, down to 100 watts for 40-seconds. VSWR <1.3:1 at 500MHz 5"w x 2⅞"h x 2"d..... **$34.95**



## KENWOOD

**BC-15A Desk Charger**
Charges Kenwood PB-13, PB-14, PB-17 & PB-18 handheld batteries in 60 to 100 minutes.

BC-15A similar to model pictured. Inserted handheld not included

**CLOSEOUT $49.95**

## ANTENNA TUNERS

**VC-300M Mobile Tuner (left)** Compact, lightweight and economical for base or mobile. use. Tunes verticals, dipoles, inverted Vs, beams and mobile whips that are fed by coaxial cable. Also tunes open wire feeders, balanced lines, or single wires. Covers 1.8 to 30 MHz with a 300W continuous power rating. The dual-movement cross-needle meter simultaneously monitors RF power output & SWR. 7⅛"w x 3½"h x 8¾"d, 2½ lbs..... **$99.95**

**VC-300DLP Antenna Tuner (right)** A quality, economical tuner Covers 1.8 to 30 MHz with a 300W continuous RF power capability from 3.5 to 30MHz (150W on 1.8MHz). Built-in dummy load, dual-movement cross-needle peak or average reading meter. Compatible with almost any antenna, coax fed, balanced or single wire. Built-in 4:1 balun and six position antenna selector switch 10⅛"w x 9½"d x 3½"h, 3½ lbs..... **$149.95**

**VC-300D Antenna Tuner (right)** Offers the same functions and specifications as the VC-300-DLP shown above, but has the additional capability to show a peak power indication by using an instantaneous responding digital bargraph meter display. A LEVEL and DELAY control has been added to calibrate the display to the meter, and to vary the delay response... **$179.95**

**HFT-1500 Antenna Tuner (left)** Rated for 1500W from 1.8 to 30MHz; 1000W (2KW PEP) on 160 and 10 meters Features a cranked continuous roller inductor with a turns counter and vernier tuning on the antenna and Input capacitors. The dual-movement cross-needle meter shows average forward and reverse power and SWR; a 21-segment bargraph indicates peak power. A true RF directional coupler sensor is used for the wattmeter circuitry. Includes a built-in 4:1 balun for balanced antenna systems and 6 position antenna selector switch. 5½"h x 12½"w x 12"d, 10 lbs.... **$399.95**

## COMET™ 40 to 2M Mobile Antenna

**CA-HV** Mobile Antenna (left) Designed specifically for use with the new radios that cover HF thru 2M. Choose either 1 or 2 of the following HF coils: 40/(*20)/15/10 meters along with constant operation on 6 & 2M. Unique fold-over hinge brings the antenna down to about 6" in height for entering garages. Mounts to most SO-239 type trunk mounts, and is about 6 ft. tall with the 40M resonator on the top.

COMET makes several duplexer combinations. The CF-530 to combines both the HF/6 meter and 2 meter radio connectors into a single connector going to the CA-HV. Should you want to use separate HF, 6 Meter and 2 Meter antennas, the COMET CF-360B duplexer will separate the HF/6 meter radio connector back into an SO-239 for HF and SO-239 for 6 meters

**CA-HV** Antenna..**$129.95** *20M coil opt.
**L-14** 14MHz coil..... **$36.95**
**CF-530** HF/2M-440MHz Duplexer.... **$74.95**

**HA-4S HF Mobile Antenna** (right) Features switching between 4 HF bands without changing coils or plugs. Standard coils include 40, 15, 12, 10M ( 20M optional). Compact and lightweight, only 1 lb, 14 oz, and just 4 ft. 10 in. tall which allows for more convenient HF mounting options than conventional HF mobile antennas. Mounts on a trunk-lip style bracket such as the Comet RS-820 (shown), or a rain gutter mount such as the RS-80. High quality construction includes a gold-plated PL-259 at the base, and a threaded collar that unscrews to expose a hinged base, allowing a 90 degree fold-over for garaging .**$179.95**

**WS-1M Window Mounting Bracket** Perfect for vehicles with pop-out windows, rental cars, etc. Adjustable, with suction cups on the inside and outside. Includes 11 ft. of coaxial cable with connectors. Heavy-duty, allows for mounting gain-type antennas such as the Comet B-20 or Comet SB-5 dualbander models, etc.. **$64.95**

**NCG Power Pocket**
Handy portable power for Emergencies, Hamfests, Hiking, etc. A 12 Volt–2 ampere/hour sealed lead-acid rechargeable battery provides extended talk time, up to 6 times longer than standard battery packs, and can be recharged to 100% anytime without the usual memory effect. Your radio conveniently plugs into the included female adapter socket. Contained in a compact carrying case with belt loop and shoulder strap, and the entire pack weighs only 30 oz. Complete recharge in 6 to 8 hours, with the supplied charger. 3½"w x 1"d x 6½"h, 30 oz..... **$66.95**

NCG Light-weight boom microphone & headset combination for popular handheld radios. Conveniently folds-up for easy storage. Boom microphone pivots to allow left or right ear speaker position. Includes push-to-talk switch and 36" cord.
**MP-28** Icom, Standard Yaesu, Alinco version **$39.95**
**MP-28K** Kenwood.... **$39.95**

## RANGER Communications, Inc.

*for...*
*NOVICE*
*TECH +*
*GENERAL*
*ADVANCED*
*EXTRA Class*

## 10 Meter TRANSCEIVERS

***Four models provide loads of fun for everyone! Operate local communications as well as frequent World-wide DX – Base or Mobile!***

***Participate in Club Events, Nets, Repeaters, Emergency Communications and more!***

✔ **BAND:** 10 meters only; 28.000 to 29.699 MHz
✔ **MODES:** LSB, USB, CW, AM, FM
✔ **POWER:** **RCI-2950** 25W SSB – 8W AM, FM & CW
**RCI-2970** 100W SSB – 50W AM, FM & CW
**RCI-2980** 25W SSB – 10W AM, FM & CW
**RCI-2990** 100W SSB – 50W AM, FM & CW

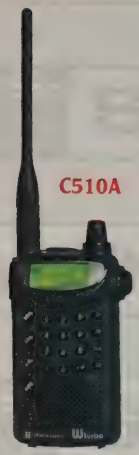
**Additional RCI-2950/2970 Features:** • Mobile Operation RIT • Squelch • Noise Blanker • RF Gain Control • RF Power Out Selector • Repeater/Offset Switch • Channel Selector Scanning • Memory Channel Scan • 4-step LCD Brightness Control • PA Mode • External Speaker Jack • Memory Back-up • Multi-function LCD Display • 13.8VDC

**RCI-2950** 2⅝"h x 7⅞"w x 10⅞"d, 4¼ lbs..... **$259.95**
**RCI-2970** 3¾"h x 7⅞"w x 10⅞"d, 7¼ lbs..... **$369.95**

**Additional RCI-2980/2990 Features:** Both are Base Stations with built-in 120 VAC power supply. They have most of the RCI-2950/2970 features and more!

**RCI-2980** 22"w x 6"h x 11"d, 36 lbs ..... **$419.95**
**RCI-2990** 23"w x 6"h x 11"d, 38 lbs ..... **$629.95**

# Get A Grip On Standard's Hand-Helds!



C510A

## C510A 2 Meter & 440MHz The Deluxe Dual-Band HT

- 1w-2m and 1w-70cm
- 200 memories + VFO and Call
- CTCSS 39 tones –Encode/Decode
- Freq steps 5, 10, 12.5, 15, 20, 25, 30 and 50
- Scanning-busy, pause or hold
- 1750 burst

C508A

## C508A 2 Meter & 440MHz Dual Band

VHF & UHF IN YOUR SHIRT POCKET

- 280 mW with 2-AA batteries
- 60 memories
- 100-180, 340-400 & 400-480MHz extended receive (including AM aircraft band)
- CTCSS Encode/Decode
- 22 menu selections
- Scanning-busy, pause or hold
- Freq steps 5, 10, 12.5, 15, 20, 25, 30 and 50

C108A

## C108A 2M & Very Small HT

- 20 memories
- 100-174 0MHz extended receive (including AM aircraft band)
- CTCSS Encode 23 tones
- 1 MHz, Full Range, Memory, and Memory-Scan-Memory: Programmable for Pause & Busy
- DC Power: 2 alkaline AA penlight cells

C188A
C288A

## C188A 2 Meters The Slim-Line HT

- Fits in your shirt pocket!
- 5W at 12VDC
- 40+ memories (or optional 200+memories with snap-in chip)
- 115-174MHz extended receive (including AM air band)
- CTCSS Encode/Decode
- DTMF squelch with Paging
- Scanning-busy, pause or hold

## C288A 220 MHz Slim-Line HT

- Same as C188A but for the 1 1/4 meter band
- 115-249 MHz extended receive
- TX 220 MHz band

C628A

## C628A 70 cm & 23 cm The Deluxe Twin-Band HT

- 5W 70 cm, 1W 23 cm at 12VDC
- 40 memories 20 + 20 "limited"
- CTCSS Encode/Decode
- DTMF squelch with Paging
- Scanning-busy, pause or hold
- RIT on 23 cm

C168A

## C168A 3 Meters The Deluxe small HT

- 5 watts at 12VDC
- 40+ memories (optional 200+ memories with plug-in chip)
- 115 to 174MHz extended receive (including AM aircraft band)
- CTCSS Encode/Decode
- DTMF squelch with Paging
- Scanning-busy, pause or hold

STANDARD'S ON THE WEB!

HTTP://WWW.STDRADIO.COM

C178A

## C178A 2 Meters (+low power 440) The Deluxe Dual-Band HT

- Single-Band Price
- 5W (2M) at 12VDC & 50mW (440)
- 40+ memories (opt 200+ with plug-in chip)
- 110-174 & 320-474MHz extended Rx (including AM air band)
- CTCSS Encode/Decode
- DTMF squelch with Paging
- Scanning-busy, pause or hold

## C156A 2m Transceiver

STANDARD'S QUALITY! STANDARD'S FEATURES! EVERYBODY'S PRICE!

- 5 watts high power
- 100 memories
- 135 to 174MHz extended receive
- Clear Dot-Matrix display with alpha-numeric ID
- CTCSS Encode built-in
- 9 DTMF memories
- Scanning-busy, pause or hold
- Auto repeat offset
- Built-in 1750 Tone Burst
- Auto-Power-Off 30, 60, 90 or 120 min

C156A

C558A

## C558A 2 Meter & 440MHz Elegance, Balance and Twin-Band Performance

- 5W at 12VDC
- 40+ memories (opt. 200+ memories with plug-in chip)
- 115-174 & 340-474MHz extended receive (including AM aircraft band)
- CTCSS Encode/Decode
- DTMF squelch with Paging
- Scanning-busy, pause or hold

SR STANDARD®

*For more information on this and other STANDARD products, please contact your nearest STANDARD dealer. Specifications, price and features are subject to change without obligation or notice. Standard Amateur Radio Products, Inc. P.O. Box 48480, Niles, Illinois 60714. Tel (773) 763-0081 Fax (773) 763-3377*

# Keep On Movin' with STANDARD's Mobiles

## 3 Bands...2, 70 cm, & 6 Meters! C5900DA! One compact package!

## C1208DA Twin-Band has everything in the Speaker/Mic... and delivers 50 watts, too!

### C5900DA FEATURES...

Tested tough against intermod with Double Balanced Mixer (DBM) and Tracking Front-End
DTMF remote control with HT
Cross-band repeat, 6M, 2M and 70cm with CTCSS encode/decode
Full Duplex cross-band operation with CTCSS encode/decode
7 priority hyper frequencies
1200-9600 packet interface
Antenna Triplexer Built-in one antenna for all bands
Dual-frequency display; left side 6m, 2m and 70cm, right side 2m and 70cm
Frequency Receive Range:
Left band 44.000 - 99.995 MHz
100.000 - 199.000 MHz
240.000 - 530.000 MHz
Right band 100.000 - 200.000 MHz
260.000 - 510.000 MHz
550.000 -1020.000 MHz*
(both including AM aircraft)
45 Watts 6M, 50 Watts 2M and 35 Watts 70cm (3W Low, 10W Medium selectable) transmit ham-bands
*cellular blocked on 800 MHz band
Size: 5.51"W 1.57"H 6.81"D
Weight=2.65 lbs.

### MEMORIES...

- 80 memories (each side); stores frequency, offsets, CTCSS tones and much more
- Expandable 200 memories each side with optional, CMU161
- Frequency steps, 5, 6.25, 10, 12 .5, 15, 20, 25, 30, 50 and 100 kHz.
- Paging\Coded squelch
- DTMF autopatch dialing, 12 memories, 6 per side, 15 digits
- Eight kinds of scan: 1 MHz, entire band, program, memory, block memory, program memory, memory scan memory and tone

### DISPLAY...

- Snap-on front display or remote the radio in the trunk or under the front seat
- Back-lit Keypad and Display
- MY key, store favorite function
- TX Time-Out-Timer 3, 5, 15 mins
- Auto power-off 3, 6, 9 hrs
- Auto mute opposite band -20dB
- Beep-tone off, low or high
- Cooling fan built-in.

Mobile bracket and power cord (2M) included

MARS and CAP modification available; permit required

### C1208DA TWIN-BAND MOBILE FEATURES...

A full featured 2-meter rig that fits anywhere, yet puts out a full 50 watts as well - that's Standards C1208DA!

With all controls and the large liquid crystal display in the speaker/mic, this rig can mount anywhere - no more compact car woes! The rig's under the seat, behind the dash, or in the trunk (with optional extension cable) - all you need is in your hand. All this, plus it's packet ready (up to 9600 baud)!

Frequency range:
Receives 110-199.995 MHz and 250-519.995 MHz plus 800* MHz (including AM aircraft) .
50 Watts, 10W and 3W selectable
Built in Antenna Duplexer for 450 MHz receive
*Cellular blocked on 800 MHz band

### MEMORIES...

- 100; stores frequency, offsets and CTCSS tones.
- CTCSS Encode/Decode standard.
- Frequency steps, 5, 10, 12.5, 15, 20, 25, 50 and 100 Khz.
- Paging/Coded squelch.
- DTMF autopatch dialing, 10 memories, 15 digits.
- Six kinds of scan, including priority and CTCSS.

### DISPLAY...

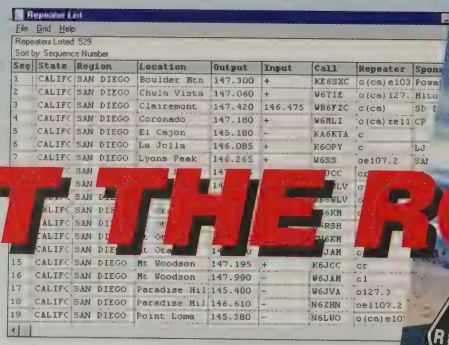
- Back-lit Keypad and Display
- Auto mute: four settings (-10, -20, -30 and off)
- Semi Duplex cross-band operation with CTCSS tones
- Cooling fan built-in

Size: 5.51"W 1.18"H 5.79"D
Weight 1.65 lbs..

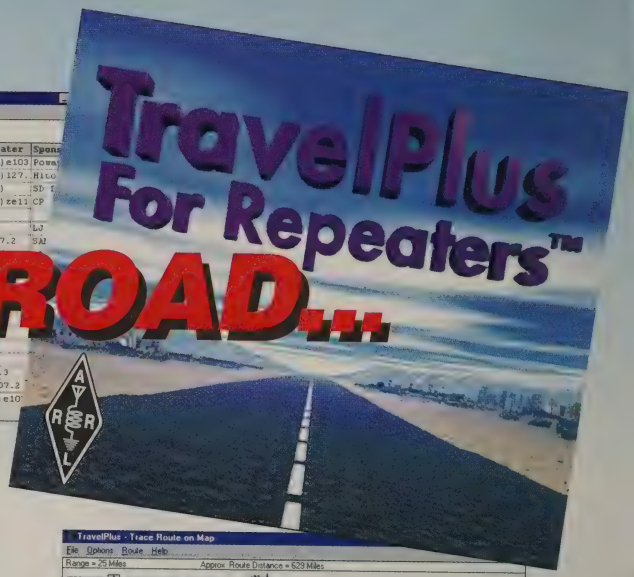
Mobile bracket and power cord (3m) included.

*For more information on this and other STANDARD products, please contact your nearest STANDARD dealer. Specifications, price and features are subject to change without obligation or notice. Standard Amateur Radio Products, Inc. P.O. Box 48480, Niles, Illinois 60714. Tel (773) 763-0081 Fax (773) 763-3377*

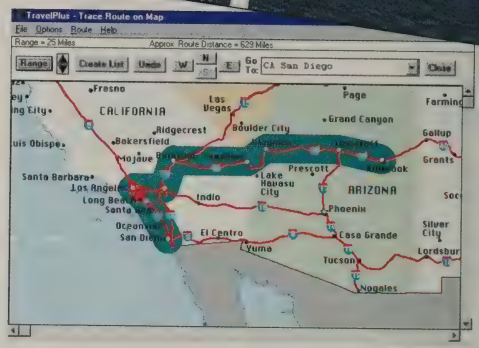
STANDARD®




# HIT THE ROAD...




## Find Repeaters Fast... with the TravelPlus for Repeaters™ CD-ROM




**Planning a trip? Want to know which repeaters are within range from wherever you are along your travel route? Sound like the impossible dream? Not anymore. All you need is a few minutes and *TravelPlus.*™**

**This exciting new CD-ROM product enables you to locate repeaters along any travel route and access repeater data in ways you never thought possible. You can quickly find all the information you need to pre-program your rig or take along a sequential list of repeaters for your entire trip. The best part is that using *TravelPlus* is fast, easy and fun. If you can point and click a computer mouse, you can:**

- Trace a route and find all repeaters within a specified range on whatever bands you select.
- Identify all repeaters within up to 500 miles of any location.
- Print map screens or repeater lists based on your travel route. Choose maps that display major highways and cities in the US and Canada, or more detailed maps that add state highways in the US.
- Customize repeater information for your needs. Find repeaters for selected bands; select repeaters only for certain locations or regions; locate open repeaters and those with autopatch capability; sort alphabetically by state, region and location; sort by frequency in ascending or descending order; sort in reverse sequence order for your return trip. Includes the entire ARRL VHF/UHF Repeater DataSource.
- Save route files and repeater list files to disk for future reference or for linking routes from one map set to another.
- View Help Topics for all screens.

**Minimum System requirements:**

- IBM-compatible PC with a 386DX/25 MHz processor or better (486DX or Pentium™ recommended). Math coprocessor required.
- 8 MB of RAM (16 Mbytes or more recommended).
- Hard disk with at least 4 Mbytes of free space for installation.
- Microsoft *Windows*™ 3.1 or higher.
- 640 x 480 x 256-color graphics supported by *Windows* (recommended mode).
- CD-ROM drive supported by your system (double speed or faster recommended).
- Mouse or equivalent pointing device.

***TravelPlus*** includes the entire ARRL Repeater DataSource for selecting, sorting and printing custom VHF/UHF repeater listings. Once you've tried it you'll find ***TravelPlus for Repeaters*** indispensable in your travel planning.

**ARRL** AMERICAN RADIO RELAY LEAGUE

EDSP RX/TX

# All-Mode HF Transceiver FT-1000MP

The year was 1956. Electronic communication throughout the world was on the threshold of significant and remarkable change. Intrigued by the development of single-sideband radio theory, a young engineer and amateur radio experimenter painstakingly assembled an SSB transmitter. Word of his successful efforts spread quickly among his friends, and soon radio amateurs from all over the country were requesting transmitters just like it. Thus was born the first invention of JA1MP, founder of Yaesu. Though his key is now silent, in tribute to his leadership and exceptional contributions to the radio art, the FT-1000MP carries the memory of his call sign.

## An HF Masterpiece, Combining the Best of Digital and RF design technology. The FT-1000MP.

### Specifications

- EDSP (Enhanced Digital Signal Processing)
- Shuttle-jog Rapid Tuning Enhancement
- Directional Tuning Scale for CW/Digital mode and clarifier offset display
- Dual In-Band Receive w/ Separate S-Meters
- Selectable Antenna Jacks
- Collins SSB Mechanical Filter built-in, 500 Hz CW Collins filter plug-in, optional
- Selectable Cascaded Crystal and Mechanical IF Filtering (2nd and 3rd IF Filters)
- User-programmable Tuning Steps w/0.625 Hz High Resolution Low-Noise DDS Circuit
- Custom Feature Set-up via New Menu System
- Adjustable TX Output Power: 5-100W (5-25W AM)
- True Base Station: Both 100-117 or 200-234± VAC 10%, 50/60 Hz and 13.5 VDC Power Inputs

Blending digital and RF technology, the FT-1000MP features a Yaesu exclusive: Enhanced Digital Signal Processing (EDSP). Beginning on the receive side with Yaesu's industry-standard high-intercept front end design, the RF signal is then fed to the IF stages, where an impressive array of 8.2 MHz and 455 kHz IF filters (including a built-in Collins SSB Mechanical Filter) establish the tight shape factor so important in obtaining high dynamic range and low noise figure. Finally, the EDSP system provides specially-designed filter selections and response contours for maximum intelligence recovery.

Only with this combination of EDSP, independently selectable 8.2 MHz and 455 kHz IF filters, and a low-noise DDS local oscillator system can receiver performance without compromise be obtained. You can customize your FT-1000MP by choosing from 2.0 kHz, 500 Hz, and 250 Hz optional, cascaded IF filters, then zero in on weak signals using Yaesu's exclusive Shuttle-jog Rapid Tuning Enhancement and high-resolution (0.625 Hz) DDS VFO. Without question, the FT-1000MP is the most technologically advanced HF rig today.

**EDSP** operates in both transmit *and* receive modes. On receive, the EDSP produces enhanced signal-to-noise ratio and significantly improved intelligence recovery during difficult situations involving noise and/or interference. The result of hundreds of hours of laboratory and real-world experimentation, EDSP's 4 preset random noise reduction protocols and 4 digital filtering selections are controlled by easy-to-use concentric controls on the front panel of the transceiver. High, low, and mid-range cuts for voice work are teamed with razor-sharp CW bandpass filters and an automatic notch filter which identifies and attenuates undesired carriers or heterodynes. Also operational in the transmit mode, EDSP provides 4 performance-enhancement pattern selections for different operating circumstances, ensuring best readability of *your* signal on the other end of the path.

Once again, Yaesu's engineers have reaffirmed the vision and dedication of JA1MP which began nearly 40 years ago. See the incomparable FT-1000MP today.

**FT-1000/D**
Legendary 200W
All Mode HF Transceiver
"The Dream Station"

**YAESU**
*Choice of the World's top DX'ers*

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17210 Edwards Road, Cerritos, CA 90703
(562) 404-2700

Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details. Collins is a trademark of Rockwell International Corporation

# Leading the way in HF technology.

**FT-1000MP**
**Revolutionary All-Mode HF Transceiver with EDSP™**
•Enhanced Digital Signal Processing (EDSP™) Noise Reducer, RX/TX waveform Contour shaping control, Digital Notch plus IF Notch, Digital CW Narrow Filters, Microphone Equalization • Shuttle Jog™ Tuning Enhancement • Directional Tuning Scale for CW/Digital Modes and Clarifier Offset Display • Selectable Antenna Jacks • Programmable Tuning Steps • 100W PO • Dual In-band Receive with Separate S-meters • Built-in Collins® SSB Mechanical Filter • CW Electronic Keyer with two Key jacks • CW Spot • Automatic Antenna Tuner • 100-117, 200-234V AC and 13.5V DC power inputs • DC version available • 99 Memories.

**FT-1000/D**
**Elite-Class All-Mode HF Transceiver**
• 200W PO • Dual Receive • 108 dB dynamic range • Cascaded IF Filters • Direct Digital Synthesis (DDS) • IF Width/Shift/Notch • CW Spot • CW Audio Peaking Filter • CW Electronic Keyer with two Key jacks • IF Noise Blanker • Automatic Antenna Tuner • RF Speech Processor • Front panel RX Antenna selector switch • Two large fly-wheel-weighted tuning knobs • 99 Memories.

**FT-920**
**All-Mode HF/6m Transceiver**
• High-Performance 33MIPS* DSP • HF + 50 MHz w/100 Watts-all Bands • MOSFET PA Finals • High Speed Auto Antenna Tuner (works on RX & TX) • Omni-Glow™ Dual Display • Twin VFO Knobs • FET RF Amplifier for High & Low Bands • Digital Voice Memory System • Quick Memory Bank (QMB)Frequency System • 127 Memories. *Million Instructions Per Second

**FT-900C/AT**
**Deluxe Compact HF Transceiver**
• Detachable Front Panel Design • 100W PO • Built-in Collins® SSB Mechanical Filter • Automatic Antenna Tuner • IF Shift/Notch • Keypad Frequency Entry • Duct Flow Cooling System • Digital Metering • Adjustable CTCSS Tones • 100 Memories.

**FT-840**
**High Performance Compact HF Transceiver**
• High Receiver Dynamic Range • Dual Band Stacking VFOs with Direct Digital Synthesis (DDS) • 100W PO • IF Shift • IF Noise Blanker • Digital Mode Interface • CW-Reverse feature • Adjustable Repeater CTCSS Tones • Optional (External) Automatic Antenna Tuner • 100 Memories.

**FT-600**
**Multi-Purpose HF SSB Transceiver**
Frequency Range: RX: 50 kHz - 30 MHz; TX: 160-10M • 100W PO • MIL-STD 810 Rating • Alphanumeric Omni-Glow™ LCD Display • Keypad Frequency Entry • Optional CW (500 Hz) and AM (6 kHz) filters available • Dual Watch • Front-mounted Speaker with High Audio Output • PC Programmable • 100 Memories (in 4 banks of 25).

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Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details. Collins is a Registered trademark of Rockwell International Corporation.

YAESU
*Choice of the World's top DX'ers*

For the latest Yaesu news, hottest products, visit us on the Internet! http://www.yaesu.com

*"The FT-920 is packed with really high-tech features!"*

*"And, it's got 6 meters built in, too!"*

*"Yeah! Shuttle Jog, DSP--with a 33MIPS* processor--fastest on the market."*

*"Looks like Yaesu did it again!"*

# FT-920

## All-Mode HF/6m Transceiver

You know the difference--and so does Yaesu. Signals buried in noise and interference miraculously appear at your speaker--the surest indicator of HF quality. As always, cutting-edge technology inside separates the world leader in amateur radio from the rest of the pack. No surprise to you.

What makes the difference? High-performance 33MIPS* Digital Signal Processing (DSP), for razor-sharp selectivity, increased average power output, and voice pattern contour choice; automatic seeking DSP Notch filter and Noise Reduction; built-in high-speed antenna tuner for RX *and* TX; user-friendly DSP Bandwidth controls for enhanced interference reduction; and exclusive Shuttle Jog tuning controls for fine or rapid frequence excursions. For operating efficiency, the FT-920 also has a Digital Voice Recorder and Electronic Memory Message Memory Keyer. Providing up to 100W of adjustable power output on all amateur bands from 160 through 6 meters, the FT-920 uses rugged, low-distortion MOS FET final amplifier transistors. SSB, CW, AM (25W carrier), AFSK, and FSK are built in, with FM, optional.

All of this, and an ergonomically-designed front panel--including Yaesu's renowned Omni-Glow™ display--give you the highest-performing, HF/6 meter rig in its price class.

For more details on the new and different FT-920, call or write for a free brochure, or better yet: hear the difference at your dealer today!

**YAESU**

*. . . Choice of the World's top DX'ers*

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### Features

- High Performance 33 MIPS* Digital Signal Processing (DSP) in all Modes with one touch control
- HF + 50 MHz with 100 Watts Output on all Bands
- New Design MOSFET PA Finals
- Built-in High Speed Auto Antenna Tuner including 50 MHz (Antenna Tuner works on both RX & TX)
- Auto Notch/Noise Reduction Control
- Simplified Tuning with Shuttle Jog Control
- Omni-Glow™ Dual Display with Twin VFO Knobs
- Separate FET RF Amplifier for High & Low Bands
- Digital Voice Memory System
- Quick Memory Bank (QMB) Instant Frequency Memory System

*Million Instructions Per Second

# The real difference is the signals you hear-- not the ones you see.

State-of-the-Art DSP Bandwidth Controls

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Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details. Collins is a trademark of Rockwell International Corporation.

**FT-1000MP**

This HF standout features a high-intercept front end design, EDSP, and built-in Collins SSB Mechanical Filter

# VHF/UHF All-Mode Transceiver FT-736R

"Why bother with imitation satellite rigs, when the FT-736R has more bands, and AC and DC, too?"

"Right! And Yaesu also makes a choice of two companion rotators!"

"Yaesu did it again!"

# Satellite leader for eight years, far and away.

Demanding VHF and UHF amateur operators know their "stuff." That's why the Yaesu FT-736R, and companion G-500A or G-5400B rotator, have been their station of choice for over eight years. To sustain that leadership position, Yaesu engineers specifically designed the FT-736R to meet the mandates of this unique operating interest.

Not only does the FT-736R come with 144 and 430 MHz bands, easy-to-install modules instantly add two more, for a total of four. To customize your transceiver, choose from bands available in 50, 222, or 1240 MHz. Four bands – available on only one radio – the FT-736R.

No tuning problems with the FT-736R, either. Unlike other "me-too" transceivers, Yaesu's pioneering VFO Tracking System (VTS) automatically sets the uplink frequency on inverted or non-inverted transponders, and the built-in Discriminator Center Meter displays the frequency in use and allows precise tuning on LEO satellite FM downlinks. For flexible operating power needs, the FT-736R uses either 13.8 VDC, or its own built-in AC power supply. To simplify station setup, interface jacks for PTT, external speakers, TNC Connection, and linear amplifier make installation a snap!

Low receiver noise figures, and a built-in IF CW filter make the FT-736R ideal for weak signal work: EME, Meteor Scatter, FAI, Sporadic-E, or Tropo. Add the G-500A or G-5400B Rotator to the FT-736R, and your complete and exclusive Yaesu package for satellite operation is up and running.

There's no rig quite like the FT-736R. For sheer numbers of specialized features, unquestionable benefits, and satellite rotators made by the only radio manufacturer in the world, let Yaesu take you far and away.

## Specifications

- Frequency Coverage
  2m: 144-148 MHz
  70cm: 430-450 MHz
- 100 Memory Channels
- Full Cross-band Duplex w/Inverted Tracking for AO-13
- Easy Interface to TNC via Data In/Out Jack
- RF Output Power:
  25 W on 144, 222 & 430 MHz
  10 W on 50 & 1240 MHz
- 117/220 VAC, 13.8 VDC
- Emission Types
  LSB/USB (J3E Voice), CW (A1A)
  FM (F2D, FSK, F3E Voice)
  TV (A3F optional, for 1.2 GHz*)
  *Requires optional Unit

**YAESU**

*Choice of the World's top DX'ers*

### G-500A

Elevation rotator for space communication antennas.

Max. Antenna Wind Load: 12 sq. ft.

Mast Size: 1½"-2½"

Boom Dia.: 1¼"-1½"

### G-5400B

Azimuth-Elevation combination for space communication antennas. DIN connection for computer operation.

Max. Antenna Wind Load: 11 sq. ft.

Mast Size: 1½"-2½"

Boom Dia.: 1¼"-1½"

Rotator Size: 12½"H x 7½" Dia. (Mounted together)

(GS-232 Computer Interface Available)

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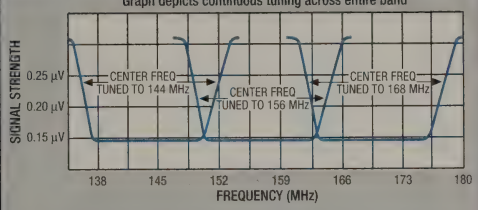
# Advanced Track Tuning, Mil Spec, true FM. All in one radio!

Outside, you can easily see why the FT-2500M stands up to the shock and vibration like no other. We engineered the first mobile radio to meet the rigid standards set by the U.S. Military back in the '80s, and that same critical design is in the FT-2500M. From the simplified front panel, rubber coated knobs, durable pebbled finish coating, and huge Omni-Glow™ display to the one-piece die-cast chassis, the FT-2500M can take whatever you throw at it!

Inside, the electrical circuitry meets standards so uncompromising the FT-2500M can respond like no other radio. Built-in 3-Stage Advance Track Tuning (ATT), automatically retunes from 140 to 174 MHz permitting consistent receiver sensitivity across the entire band.

But there's more. Like alpha-numeric display capability! Lets you program a frequency or a 4-character name on any of the 31 memories. With three selectable power output levels and up to 50 watt power output, the FT-2500M extra large heat sink means forced air cooling is not necessary. And, as a bonus, Yaesu's exclusive backlit DTMF mic comes with every FT-2500M.

Experts say the FT-2500M is the only commercial-grade amateur radio available. So, for tough manufacturing standards, inside and out, with true FM clarity, and outstanding performance, the FT-2500M is your mobile.




**3-Stage Advance Track Tuning (ATT)** – The exclusive 3-Stage Advance Track tuning front end automatically adjusts band width sensitivity across the entire receiver range, while maintaining selectivity specifications. ATT significantly reduces interference from inter-modulation and front end overload.

## Specifications

- **Frequency Coverage:**
  FT-2500M
  RX: 140-174 MHz
  TX: 144-148 MHz
  FT-7400H
  RX/TX: 430-450 MHz
- Rugged Military Spec Design
- Advanced Track Tuning (ATT)
- Selectable Alpha-Numeric Display
- Omni-Glow™ Display, largest available
- Power Output:
  FT-2500M 50/20/5 Watts
  FT-7400H 35/15/5 Watts
- Flip Up Front Control Panel hides seldom used buttons
- Backlit DTMF Mic
- 31 Memory Channels
- CTCSS Encode Built-in
- Automatic Power Off (APO)*
- Time-Out Timer (TOT)*
- Manual* or Automatic Backlighting Adjustment
- **Accessories:**

| | |
|---|---|
| **FP-800** | 20 Amp HD Power Supply w/ Front Mounted Speaker |
| **FRC-6** | DTMF Paging Unit |
| **FTS-17A** | CTCSS Decode Unit |
| **SP-4** | External Mobile Speaker w/ Audio Filters |

*FT-2500M

**YAESU**

*Performance without compromise.℠*

"Just look inside. Military spec really means something to Yaesu!"

"A QST review says 'the FT-2500M exhibited superior 10 MHz offset IMD dynamic range of 103 db!'"

"This Advanced Track Tuning practically eliminates intermod!"

"Yaesu did it again."

US MILITARY APPROVED MIL-SPEC 810

## FT-3000M

High-Powered 2-m FM Transceiver
Feature-rich, 70 full watts of TX power, and built to the tough performance standards you've come to expect from Yaesu.
FEATURES • Frequency Coverage Wide Band Receive-- RX:110-180 MHz, 300-520 MHz, 800-999 MHz* TX:144-148 MHz • AM Aircraft Receive • MIL-STD 810 Rating • Interactive Programming • High Power Output: 70 Watts, plus 50, 25 and 10 Watts • Quick-Touch™ Dual Concentric Control Knob • Twin Cooling Fans • ADMS-2 Windows™ Programmable • Digital Coded Squelch (DCS) • 81 Memory Channels • Auto Range Transpond System™ (ARTS™) • 1200/9600 Baud Packet Compatible • Smart-Search™ • Alphanumeric Display • Dual Watch • Full line of accessories
*800 MHz Cellular blocked

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High Powered 2-m FM Transceiver **FT-3000M**

# It's Awesome!

You know who you are. You drive farther, use your mobile rig longer, and buy the most dependable radio products you can get. The FT-3000M is the *only* amateur 2-m FM mobile radio with 70 full watts of TX power! Reassuring, when you're driving a lonely stretch of highway!

Like the 50-Watt FT-2500M, the FT-3000M is rated MIL-STD 810. And, both let you take the back roads with confidence. Built to resist jolts, bumps and the corrosive affects of dust, mist, and rain, the new FT-3000M, and popular FT-2500M take abuse and perform like champs. Plus, the FT-3000M is a great base, too.

The new FT-3000M comes equipped with some sensational exclusive features!

- WIDE BAND RECEIVE! From 110-180 MHz, VHF, and 300-520 MHz UHF to 800-999 MHz*. And, AM aircraft receive!
- TWIN COOLING FANS! Unique, twin fans keep the FT-3000M running cool without a problem! So, don't worry about long transmission keydowns.
- SELECTABLE POWER OUTPUT! An awesome 70 watts, plus 50, 25, and 10 Watts.
- TRUE FM! Voice clarity has never been better.
- INTERACTIVE PROGRAMMING! Continual scrolling menu guides you through 50 settings—and won't let you forget the next step!
- SIMPLIFIED FRONT PANEL! New Quick-Touch™ dual-concentric knob controls menu programming and adjustments.
- PC PROGRAMMABLE! Optional ADMS-2B Windows™ Programming Software programs your FT-3000M in seconds!

The FT-3000M is feature-rich just like the FT-2500M, 50-Watt mobile, and built to the tough performance standards you've come to expect from Yaesu. We think you should have at least one, don't you?

"This is true Wide Band receive! VHF, UHF, and 800-999 MHz."*

"Digital Code Squelch gives me more privacy than CTCSS."

"Smart-Search™ scans and stores active channels for quick access."

"Yaesu did it again!"

US MILITARY APPROVED MIL-SPEC 810

70 Watts Output Power

## Features

- Frequency Coverage
  Wide Band Receive
  RX: 110-180 MHz,
  300-520 MHz,
  800-999 MHz*
  TX: 144-148 MHz
- AM Aircraft Receive
- MIL-STD 810 Rating
- Interactive Programming
- High Power Output: 70 Watts, plus 50, 25 and 10 Watts
- Quick-Touch™ Dual Concentric Control Knob
- Twin Cooling Fans
- ADMS-2B Windows™ Programmable
- Digital Coded Squelch (DCS)
- 81 Memory Channels
- Auto Range Transpond System™ (ARTS™)
- 1200/9600 Baud Packet Compatible
- Smart-Search™
- Alphanumeric Display
- Dual Watch
- Full line of accessories

* Cellular Blocked

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*"The quick-release remote front panel gives you so many installation options ."*

*"And with dual receive you can talk on one band, and listen on another!"*

*"Plus, the high-tech Enhanced Smart Search™ is great for finding repeaters --and you can watch it all on the dual display."*

*"Looks like Yaesu did it again!"*

# FT-8100R

## Compact Dual Band Mobile

# Now a dual-bander that remotes and is easy-to-use, without sacrificing the features you want!

With its quick-release, remote front panel system, the FT-8100R combines high-performance dual-band features in a simple-to-operate rugged mobile built to the endurance standards of commercial radios. The result is installation flexibility and industry-first, "must-have" advantages!

Use dual receive (V+V, U+U or V+U), or talk on one band while listening on another. Watch Yaesu's exclusive Enhanced Smart Search™ automatically seek out and load active frequencies--great for finding new repeaters while traveling.

Get wide receive coverage--from 110 to 550 MHz and 750 to 1300 MHz* for public safety, marine, aircraft, and weather channels. Enjoy up to 50 Watts of VHF power output (35 Watts on UHF) with High/Medium/Low choice on each band, and "plug and play" 1200 or 9600 bps packet. Utilize 208 memory channels--the greatest available on any remote mobile--to store repeater offset, CTCSS tone, packet baud rate, and power level.

Yaesu's popular Omni-Glow™ display provides a wide field of view, and includes a DC voltage meter. Quickly program, or clone frequency memories with optional Windows™ PC programmable ADMS-2D.

"User-friendly" describes the streamlined front panel layout. Eight clearly-marked keys, and separate Volume/Squelch controls for each band, make operation easy. And the backlit DTMF microphone includes 3 user-programmable keys...but no awkward keypad cover!

Don't sacrifice high-performance features in your dual-band mobile installation Get the easy-to-use FT-8100R at your Yaesu dealer now!

**YAESU**

*...leading the way.™*

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### Features

- Frequency Coverage
  RX: 110~550 MHz
  750~1300 MHz*
  TX: 144~148 MHz
  430~450 MHz
- Detachable Front Panel (remotable w/optional YSK-8100)
- 3 Power Output Levels
  2m 50/20/5 Watt
  70cm 35/20/5 Watt
- 208 Memory Channels
- Enhanced Smart Search™
- CTCSS Encode
- Built-in Duplexer
- S-Meter Squelch
- Dual Receive (V+V,U+U,V+U)
- Crossband Repeat (bidirectional or one-way)
- PC Programmable w/optional ADMS-2D
- Digital Battery Voltage Display
- Auto Power Off (APO)
- Omni-Glow™ Display
- 1200/9600 bps Packet Compatible
- Alternating-Band Memory Selection (ABMS)
- DTMF Autodialer (6 Memories)
- Time Out Timer (TOT)
- Accessories: Consult your local Yaesu dealer.

*Cellular & 900 MHz Cordless Phone frequencies blocked.

**50W/VHF**
**35W/UHF**

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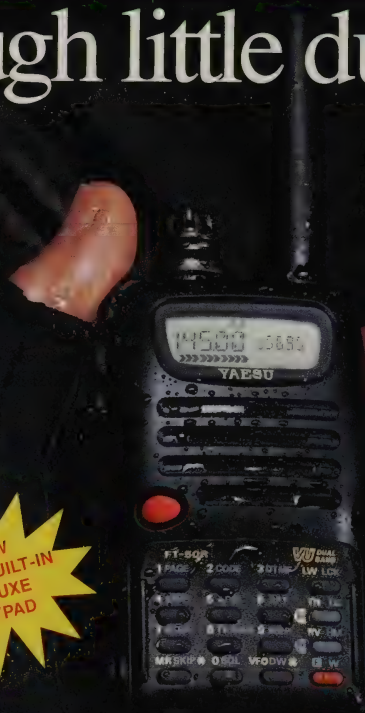
Ultra Compact Dual Band Handheld **FT-50RD**

# One tough little dual bander!

## Features

- Frequency Coverage
  Wide Band Receive
  RX: 76-200 MHz, 300-540 MHz, 590-999 MHz*
  TX: 144-148 MHz, 430-450 MHz
- AM Aircraft Receive
- MIL-STD 810 Rating
- Digital Coded Squelch (DCS)
- 112 Memory Channels
- 12V DC Direct Input
- High Speed Scanning
- Alphanumeric Display
- CTCSS Encode/Decode
- Auto Range Transpond System™ (ARTS™)
- Dual Watch
- Direct FM
- High Audio Output
- ADMS-1C Windows™ PC Programmable
- Four Battery Savers:
  Automatic Power-Off (APO)
  Receive Battery Saver (RBS)
  Selectable Power Output (SPO)
  Transmit Battery Saver (TBS)
- Time Out Timer (TOT)
- 2.5 and 5 Watt Versions Available
- Built-in Digital Voice Recording System (DVRS)
- Full line of accessories




*"You notice how loud this HT's audio is?"*

*"Yeah, it's Mil Spec tough like a commercial HT."*

*"Easy to operate, small, great price!"*

*"Yaesu did it again!"*

US MILITARY APPROVED MIL-SPEC 810

The foremost in top-performing, durable, dual band handhelds now includes the FTT-12 DTMF keypad with CTCSS enc/dec, DCS enc/dec, DVRS and paging/coded squelch. Manufactured to rigid commercial grade standards, the FT-50RD is the only amateur dual band HT to achieve a MIL-STD 810 rating. Already a winner; the deluxe keypad makes this stand-out HT even better! Water-resistant construction uses weather-proof gaskets to seal major internal components against the corrosive action of dust and moisture. And, the rugged FT-50RD withstands shock and vibration, so throw it in with your gear!

Exclusive features set the FT-50RD apart, too. Wide Band Receive includes 76-200 MHz (VHF), 300-540 (UHF), and 590-999 MHz*. Dual Watch checks sub-band activity while receiving on another frequency, then when a signal is detected, shifts operation to that frequency. Digital Battery Voltage displays current operating battery voltage. Digital Coded Squelch (DCS) silently monitors busy channels. Auto Range Transpond System™ (ARTS™) uses DCS to allow two radios to track one another. And, the FT-50RD is ADMS-1C Windows™ PC programming compatible, too. To round out the FT-50RD, it has four battery savers, and super loud audio—remarkable in an HT this size.

A reliable companion where ever you go, the FT-50RD is one tough little dual bander with all the features you want!

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*...leading the way* SM

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**FT-10/40R**
**Ultra Compact Handhelds**
VHF or UHF. Similar to FT-50RD including MIL-STD 810, and other exclusive features.

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NEW
Dual Band HT

# Dual Band Handheld FT-51R

Only one Dial/Volume knob required for easier use.

# The First Dual Band HT with WINDOWS!

Three dual receive configurations VHF/VHF, UHF/UHF, or VHF/UHF with main band frequency on right or left side. Flexible programming allows transmit on main or sub band.

An 8 character alpha-numeric user help menu scrolls operation instructions in the bottom of the large, backlit display.

Digital battery voltage readout displays condition of battery in use. Scan skip function allows individual memory channel lock-out during scanning mode.

Spectrascope™ displays active adjacent frequencies in real time with relative signal strength.

FT-51R
2¼"W x 4¾"H x 1⅛"D
(2 Watt version shown.)

MH-29A2B
LCD Display Mic with Remote Functions. (Optional)

The new FT-51R Dual Band HT is state-of-the-art, and easy to use! So easy, you won't need an operating manual. Its exclusive, scrolling instruction menu located in the large, backlit display "window", guides you through total operation while simultaneously viewing the main display window.

You'll like some of the other new, exclusive features, too. Like Spectrascope.™ This unique feature displays real time, continuous scanning of activity on adjacent frequencies in VFO mode or 8 of your favorite memories. A cloning feature duplicates favorite channels to another FT-51R.

A digital battery voltage display, five power output levels, the largest backlit dual band HT keypad made, Smart Mute,™ two VFOs on both VHF and UHF, as well as available 2 Watt and 5 Watt versions, round out the exciting FT-51R. Plus, the optional MH-29A2B Display Microphone allows you to control volume and also access Memory, VFO, Call Channel, Band Selection and scanning functions. All of this in world's smallest dual band HT radio!

See the FT-51R with "windows" at your Yaesu dealer today!

"I can see two frequencies and alpha-numeric all at the same time."

"Scrolling instructions tell me what to do next!"

"I use the Spectrascope to find new contacts faster."

"Yaesu did it again!"

## Specifications

- Frequency Coverage
  VHF RX: 110-180 MHz
  TX: 144-148 MHz
  UHF RX: 420-470 MHz
  TX: 430-450 MHz
- Spectrascope™ Display
- Scrolling User Help Menu
- Alpha-Numeric 8 Character Display
- Up/Down Volume/Squelch Controls & Display
- Selectable Sub-Band TX Mute
- Automatic Tone Search (ATS)
- Digital Battery Voltage Display
- AM Aircraft Receive
- Scanning Light System (SLS)
- 120 Memory Channels (80 w/Alpha-Numeric)
- Large Backlit Keypad & Display
- Automatic Repeater Shift (ARS)
- Multiple Scanning Modes
- 3 Selectable Scan Stop Modes with Scan Skip
- Selectable 6-way Lock Functions
- Automatic Power Off (APO)
- TX/RX Battery Savers Built-in
- Handy Cloning Feature
- 5 Selectable Power Output Levels
- 5 Watt and 2 Watt versions
- Selectable RX Smart Mute™
- Cross-Band & One-Way Repeat Functions
- DTMF Paging/Coded Squelch Built-in

**Accessories**
Consult your local dealer.

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# FRG-100
## Communications Receiver

Winning the prestigious 1992 World Radio TV Handbook award for "Best Communications Receiver" when introduced is reason enough to make the FRG-100 your receiver. And if that's not enough, consider its industry-exclusive features like adjustable SSB carrier offset and user selectable 10 Hz, 100 Hz or 1 kHz tuning steps. Or the exciting Broadcast Band mode with 16 pre-programmed international broadcast bands. Even 50 memory channels and twin 12/24-hour clicks to keep you tuned in where and when you like — day or night! Join the experts and make the FRG-100 your "best communications receiver," too.

### Features

- Frequency coverage: 50 kHz-30 MHz
- 50 Memory Channels
- Twin 12/24-Hour Clocks
- User Selectable Bandwidths
- Alarm and Timer Functions
- Dual Antenna Jacks (Coax and Open Wire)

### Accessories

**FM Unit-100**: FM Receiver Unit
**TCXO-4**: Temperature Compensated Crystal Oscillator
**PA-11B**: 117 V AC Adapter
**PA-11C**: 220 V AC Adapter
**YF-110C**: CW Filter (500 Hz)
**YF-110CN**: CW Narrow Filter (250 Hz)

| Specifications | |
|---|---|
| Frequency Range | 50 kHz-30 MHz |
| Modes | USB, LSB, CW, AM, FM (optional) |
| Dimensions (W x H x D) | 9 1/4 x 3 5/8 x 9 5/8 inches<br>238 x 93 x 243 mm |

# VHF/UHF REPEATERS

## VXR-5000V
## 135-148 MHz 25 Watts

## VXR-5000U
## 400-450 MHz 25 Watts

These compact synthesized DC-powered repeaters manufactured by Yaesu for their Vertex Radio Communications commercial product line are now available for amateur use. The repeaters can be wall mounted or installed in a standard 19" rack. (Optional mounting kit required.)

| Specifications | |
|---|---|
| Frequency coverage | 135-148 MHz or 430-450 MHz |
| Power Output | 2-25 Watts @ 100% duty cycle |
| Current Consumption | 7.0 A @ 13.8 V DC |
| Frequency Stability | ±2.0 ppm, –30°C to +60°C |
| Programmable Features | Frequency, CTCSS, Hi/Low Power levels, Hang timer, Time-out timer |
| Programming | Optional VX VPL-1 programming kit |

# Rotators

You're looking at the only rotators manufactured by a major amateur radio communication company.
Who better to determine the best specifications and durability for precision amateur radio performance under all circumstances? Smooth and quiet without noisy wedge brakes, these rotators are housed in weatherproof, die-cast aluminum enclosures permanently lubricated for maintenance-free operation and years of service.

Compatible with most U.S.A. made antenna tower accesory shelves, Yaesu rotators come with a One-Year Warranty.

## Computer Controllers

Computer controllers for rotators now available.
**GS-23** Computer Controller for Rotators: G-800SDX, G-1000SDX, G-2800SDX.
**GS-232** Computer Controller for Satellite Rotator: G-5400B

| Model | Application | Mast Size | Rotator Size | Pre-sets | Wind Load |
|---|---|---|---|---|---|
| G-450XL | Light/medium-duty | 1¾-2 inches | 12½"H x 7½" Dia. | No | 10 Sq. Ft. |
| G-800X | Medium-duty | 1½-2½ inches | 12½"H x 7½" Dia. | No | 17 Sq. Ft. |
| G-800SDX | Medium-duty | 1½-2½ inches | 12½"H x 7½" Dia. | Yes | 17 Sq. Ft. |
| G-1000SDX | Heavy-duty | 1½-2½ inches | 12½"H x 7½" Dia. | Yes | 23 Sq. Ft. |
| G-2800SDX | Extra Heavy-duty | 1⅞-2½ inches | 13⅝"H x 8" Dia. | Yes | 34 Sq. Ft. |
| G-5400B | Azimuth-Elevation Rotator combination | 1½-2½ inches (Boom Dia.1¼-1⅝ in.) | Mounted together 12½"H x 7½" Dia.** | No | 11 Sq. Ft. |
| G-500A | Elevation only | 1½-2½ inches (Boom Dia.1¼-1⅝ in.) | 10½"H x 7½" Dia. | No | 12 Sq. Ft. |

## Accessories:

**GC-038** Mast Clamp, **GC-048** Mast Clamp, **GS-050** Thrust Bearing, **GS-065** Thrust Bearing, Not Shown: G-800S, G-800SDX, G-1000SDX,
** Wind load ratings are valid when rotator is mounted in tower.*
*** Rotator size mounted together.*

**G-2800SDX**
The new top of the line rotator for extra heavy duty antenna installations.
Maximum antenna wind load, 34 sq. ft.

**G-450XL**
A new entry-level rotator priced low, for light to medium duty antennas. Maximum antennas wind load, 10 sq. ft.

**G-500A**
Elevation rotator for space communication antennas.
Maximum antenna wind load, 12 sq. ft.

**G-5400B**
Azimuth-Elevation combination for space communication antennas. DIN connection provided for computer operation. Maximum antenna wind load, 11 sq. ft.

## AMERITRON

**ALS-600** • Solid-state, no tune linear. Continuous coverage 1.5–22MHz; 10/12M with kit. 100W drive for 600W PEP SSB & 500W CW output. Illuminated Cross-Needle SWR/Wattmeter. SWR & overload protection, ALC control. Transmit, ALC & SWR LED indicators. Separate 110/220V power supply. Both units are 6"h x 9½"w x 12"d, 48 lbs (total) **$1129.95**

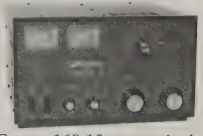
AL-800/800H AL-811/811H

**AL-800** • Covers 160-12M; modifiable for 10M Single 3CX800A7 tube, 1200W output.....**$1449.95**

**AL-800H** • Covers 160-12M; modifiable for 10M Two 3CX800A7 tubes, 1500W output.....**$2079.95**

**AL-811** • Low cost Desktop linear. Covers 160 to 12M; modifiable for 10M Uses three 811A tubes with tuned input to deliver 600W PEP SSB/500W CW output with 75W drive. Vernier drive plate tuning, illuminated grid and plate voltage/current meters, adjustable ALC. Built-in 110/220V power supply. 16"d x 13¾"w x 8"h, 40 lbs..... **$599.95**

**AL-811H** • Similar to AL-811, but four 811A tubes for 800W PEP SSB output with 75W input..**$729.95**



**AL-80B** • Covers 160-15 meters including WARC and MARS; bands. Modifiable for 10/12 meters. Single 3-500Z; 85W drive produces 1KW PEP SSB and 850W CW output. Dual illuminated cross-needle meters, QSK compatible. Built-in 110/220V supply. 14"w x 8"h x 15½"d, 52 lb..... **$1099.95**

AL-82
AL-1200
AL-1500
similar in appearance

**AL-82** • Full legal! Covers 160-12M; modifiable for 10M. Two 3-500Z's; 100W drive for 1500W cont. output. Built-in supply w/Hypersil® transformer, 220V @ 15A. 10"h x 17"w x 18"d, 76 lbs.. **$1799.95**

**AL-1200** • Full legal output! Covers all ham bands 1.8–21MHz + WARC bands; owner modifiable for 10M. Single Eimac 3CX-1200A7 ceramic tube requires 100W drive for 1500W output. Heavy silver-plated tank components, built-in heavy-duty power supply with Hypersil® transformer, 220V–15A. 10"h x 17"w x 18"d, 83 lbs..... **$1879.95**

**AL-1500** • Full legal! Covers 160-12M; modifiable for 10M. Single Eimac 8877 ceramic tube delivers 1500W+ output with only 65W drive. Heavy-duty built-in power supply with Hypersil® transformer, 220V @ 15A. 10"h x 17"w x 18"d, 77 lbs. **$2299.95**

**ALS-500M** • No tune-up, solid-state FET linear amplifier. Ideal for high-powered mobile operation. Continuous coverage 1.5 to 22MHz; 10/12M with optional kit. Four 2SCC2879's deliver 500W PEP SSB & 400W CW with less than 100W drive. SWR & overload protection, remote ON/OFF control. Requires 13.8VDC @ 80A peak for PA & 12 to 15VDC @ 4A for control and bias circuits. 3½"h x 9"w x 15"d, 7 lbs... **$699.95**

## YAESU

**FL-7000** • Solid-state HF amplifier with built-in automatic antenna tuner and power supply. Covers 160 to 12M Requires only 70W of drive for 600W output. Full break-in operation for CW, HF Packet and AMTOR. Tuner memory for settings and antenna selection. Amplifier turns off and attempts to rematch if SWR exceeds 2:1. Automatic selection of four different antennas with optional unit. Automatic band change with YAESU xcvrs; 110/220V. 5"h x 15"w x 15"d, 60 lbs..... **$2199.95**

## SGC

**SG-500**
SmartPowerCube™

A fully automatic band switching, microprocessor controlled HF Linear Amplifier. Covers 1.6–24 MHz for fixed, mobile, & marine. Rugged, nearly indestructable! Cast-aluminum enclosure, extra heavy duty heat sinks, powder coat finish and durable electronic components. 500W PEP output with 50 to 90W input; CW rating is 500W output for 10 minutes, or unlimited with an optional fan. 10–18.0 VDC @ 40A average (SSB), 90A peak, or CW. 6"h x 12¼"d x 11½"w, 21 lbs.....52-96 **$999.95**

## rfconcepts

**VHF/UHF AMPS**
Single and Duobanders
12V DC • FM/CW/SSB
Receive preamplifier
Overdrive protection

| Model | input | output | amps | Price |
|---|---|---|---|---|
| **2-meters** | | | | |
| 2-23 | 0.2-5W | 30W @ 2W in | 5 | c/o $99.95 |
| MAXAMP-10 | 10W | 150W+ | 25 | 319.95 |
| MAXAMP-45 | 40W | 150W + | 22 | 289.95 |
| VHF 1-60* | 1W | 60 @ 1W in | 10 | c/o 199.95 |
| **220MHz** | | | | |
| 3-211 | 2W | 110W | 22 | c/o 269.95 |
| **440MHz** | | | | |
| 4-32 | 3W | 20W | 4 | c/o 129.95 |
| 4-110 | 10W | 100W | 22 | 359.95 |
| 4-310 | 30W | 100W | 20 | 339.95 |
| UHF-50* | 3W | 50W | 10 | c/o 249.95 |
| **Dual Band - 2m/440 MHz** | | | | |
| 2/70* | 3W/5W | 30W/20W | 6 | $239.95 |
| 2/70G | 3W/5W | 30W/20W | 6 | 259.95 |

*Denotes No Receiver Preamplifier

| Mini-AMPS | | | | |
|---|---|---|---|---|
| 144 2 Meters | 2W | 30W | 6 | $109.95 |
| 144P | 2W | 30W | 6 | 119.95 |
| 440 440MHz | 3W | 20W | 6 | 129.95 |
| 440P | 3W | 20W | 6 | 149.95 |

(P) Denotes with Preamplifier and Receive Filter

## RF Limited

**VHF & UHF AMPLIFIERS**

*See the Price List & Product Guide for RF Limited information.*

## MIRAGE

**VHF/UHF AMPLIFIERS**

Add a MIRAGE amplifier to your rig for 30 to 600 watts of BRUTE POWER! Models for 6 meters through 70 cm – Base, Mobile, Repeater or ATV operation. *Features:* • 12V DC • FM/SSB/CW modes • Continuous duty • 20dB GaAsFET preamp • Overdrive and High-temperature protection • Remote control capability

| Model | MHz | input | out | amps | preamp | SALE |
|---|---|---|---|---|---|---|
| A-1015G | 50-54 | 10W | 150W | 23 | yes | $349.95 |
| B-34 | 144-148 | 2W | 30W | | no | 69.95 |
| B-34G | 144-148 | 2W | 30W | | yes | 89.95 |
| BD-35 | 144/440 | 45/25W | | | no | 149.95 |
| B-215G | 144-148 | 2W | 150W | 20 | yes | 339.95 |
| B-1016G | 144-148 | 10W | 160W | 25 | yes | 339.95 |
| B-1030G | 144-148 | 10W | 300W | 48 | yes | 619.95 |
| B-1060G | 144-148 | 10W | 600W | 52* | yes | 989.95 |
| B-310G | 144-148 | 4W | 100W | | no | 179.95 |
| B-2516G | 144-148 | 30W | 160W | 25 | yes | 269.95 |
| B-2530G | 144-148 | 30W | 300W | 48 | yes | 619.95 |
| B-2560G | 144-148 | 25W | 600W | 52* | yes | 989.95 |
| B-5016G | 144-148 | 50W | 160W | 24 | yes | 269.95 |
| B-5030G | 144-148 | 50W | 300W | 48 | yes | 599.95 |
| B-5060G | 144-148 | 50W | 600W | 45* | yes | 989.95 |
| C-22 | 222-225 | 2W | 20W | 5 | no | $119.95 |
| C-22G | 222-225 | 2W | 20W | 5 | yes | 154.95 |
| C-211G | 222-225 | 2W | 110W | 20 | yes | 299.95 |
| C-106G | 222-225 | 10W | 60W | 12 | yes | 214.95 |
| C-1012G | 222-225 | 10W | 120W | 5 | yes | 299.95 |
| C-1022G | 222-225 | 10W | 220W | 20* | yes | 589.95 |
| C-2512G | 222-225 | 30W | 120W | 20 | yes | 289.95 |
| C-2522G | 222-225 | 30W | 200W | 42 | yes | 589.95 |
| C-5012G | 222-225 | 50W | 120W | 20 | yes c/o | 279.95 |
| C-5022G | 222-225 | 50W | 240W | 42 | yes c/o | 529.95 |
| D-15N | 425-450 | 2W | 15W | 3 | no | $169.95 |
| D-26N | 430-450 | 2W | 60W | 12 | no | 244.95 |
| D-1010N | 430-450 | 10W | 100W | 15 | no | 354.95 |
| D-3010N | 430-450 | 30W | 100W | 20 | no | 329.95 |
| D-100-ATVN | 430ATV | 1W | 52W | 20 | no | 369.95 |
| D-1010ATVN | 430ATV | 10W | 100W | 20 | no | 369.95 |

* at 28VDC **N** denotes Type-N connectors

**RC-1 Remote Control Head** • for all Mirage amplifiers except the B-23S, B-23G, C-22G and D-26N..... **$45.95**

## MAHA

**DOCKING BOOSTERS**

With the appropriate adapter, you can slide on and boost your ICOM, KENWOOD or YAESU handheld radio up to 50W. Forget about the battery pack, the booster will power the HT at 5W.

**MH-A301** • 2m FM, 5W in/35W out, 18dB GaAsFET preamplifier.....**$115.95**

**MH-A302** • Dual Bander –2m 5W in/45W out; 440MHz, 5W in/35W out.....**$165.95**

**HT AMPLIFIERS**

**MH-A101** • 2m FM, 5W in/35W out..... **$69.95**

**MH-A102** • 2m FM/SSB, 5W in/45W out, 15dB GaAsFET preamplifier..... **$89.95**

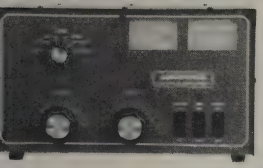
**MH-A103** • 2m FM/SSB, 5W in/50W out, 15dB GaAsFET preamplifier.....**$119.95**

**MH-A104** • 2m FM/SSB, 5W in/100W out, 15dB GaAsFET preamplifier, adjustable .....**$229.95**

**MH-A201** • Dual Bander – 2m 5W in/45W out; 440MHz 5W in/35W out..... **$159.95**

# AMERITRON
# AL-811H . . . 800 Watts . . . $729.95

***Ameritron gives you four 811A tubes, 800 watts and far better quality -- for less money -- than the competitor's 3 tube 600 watt unit . . . Why settle for less power, less quality and pay more money?***



AL-811H
**$729.95**
AES PRICE

AL-811
**$599.95**
AES PRICE

**Only** the Ameritron AL-811H gives you *four fully neutralized* 811A transmitting tubes. You get absolute stability and superb performance on higher bands that can't be matched by un-neutralized tubes.

**Ameritron** mounts the 811A tubes *vertically* -- not horizontally -- to prevent hot tube elements from sagging and shorting out. Others, using *potentially damaging horizontal mounting*, require special 811A tubes to retard sagging and shorting.

**A** *quiet*, powerful computer grade blower draws in plenty of cool air. It *pressurizes* the cabinet and efficiently cools your 811A tubes. Our air flow is so quiet, you'll hardly know it's there -- unlike noisy, poorly chosen blowers.

**You** also get efficient full size heavy duty tank coils, full height computer grade capacitors, heavy duty high silicon core power transformer, slug tuned input coils, operate/standby switch, transmit LED, ALC, dual meters, QSK compatibility with QSK-5 plus much more.

**AL-811** has three 811A tubes and gives 600 Watts output for only $599.95.

## *Kilowatt AL-80B doubles average SSB power*

AL-80B
**$1099.95**
AES PRICE

**The** AL-80B kilowatt desktop linear can *double* your *average* SSB power output with high-level RF processing -- runs cooler because its 3-500Z completely turns off between words. It saves hundreds of watts wasted as heat.

**You** get a full killowatt PEP *output* from a whisper quiet desktop linear. It's a compact 8½x14x15½ inches and plugs into your nearest 120 VAC wall outlet. Covers all bands 160-15 Meters, including WARC and MARS bands. You get 1000 watts *output* on SSB, 850 watts *output* on CW, 500 watts *output* on RTTY, an extra heavy duty power supply, 3-500Z tube, nearly 70% efficiency, tuned input, Pi/Pi-L output, inrush current protection, multi-voltage transformer, dual Cross-Needle meters, QSK compatibility, Two-Year Warranty, and much, much more! Made in U.S.A.

## AMERITRON HF Linear Amps with Eimac™ 3CX800A7

AL-800H
**$2079.95**
Two tubes
1500 Watts plus

AL-800
**$1449.95**
Single tube
1250 Watts

**AMERITRON's** new 800/H amplifiers cover 160-15 Meters including WARC bands. The AL-800 has a single Eimac™ 3CX800A7 tube and produces 1250 Watts PEP. The AL-800H has two 3CX800A7s giving 1500 Watts *plus*.

**Both** amps have an adjustable slug tuned input circuit, grid protection, ALC control that is front panel adjustable, vernier reduction drives, heavy duty 32 pound grain oriented silicone steel core transformers and high capacitance computer grade filter capacitors.

**These** amplifiers have multi-voltage operation (14 user selectable AC line voltage from 90-140; 200-250 VAC), quiet pressurized ventilation systems, dual illuminated Cross-Needle meters that read peak forward and reflected power, SWR, high voltage, grid current and plate current.

**Vernier** reduction drives make tuning adjustments smooth and easy. Ameritron's exclusive *Step-Start Inrush Protection*™ stops damage to your amplifier from inrush current. Ameritron amps feature an attractive Lexan front panel decal and superior, all metal construction -- it's built to last! Ultra compact desktop size is perfect for your operating station. 8½x16½x14¼".

## AMERITRON offers the best selection of legal limit amplifiers

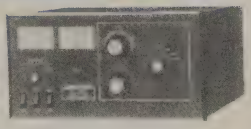
***AMERITRON's legal limit amplifiers use a super heavy duty Hypersil® power transformer capable of 2500 watts!***

### Ameritron's most powerful Linear

AL-1500
**$2299.95**
AES PRICE

**Ameritron's** super powerful amplifier uses the herculean Eimac® 8877 ceramic tube. It's so powerful that 65 watts drive gives you the full legal output -- and it's just loafing because the power supply is capable of 2500 Watts PEP.

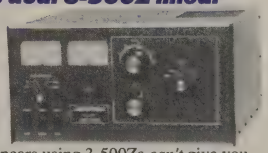
### Ameritron's 3CX1200A7 linear Amp



AL-1200
**$1879.95**
AES PRICE

**Get** ham radio's *toughest* tube with the Ameritron AL-1200 -- the Eimac 3CX1200A7. It has a 50 watt control grid dissipation. What makes the Ameritron AL-1200 stand out from other legal limit amplifiers? The answer: A super heavy duty power supply that loafs at full legal power -- it can deliver the power of more than 2500 watts PEP two tone output for a half hour.

### Ameritron's dual 3-500Z linear



AL-82
**$1799.95**
AES PRICE

**This** linear gives you full legal output using a *pair* of 3-500Zs. Most competing linears using 3-500Zs *can't* give you 1500 watts because their lightweight power supplies can't use these tubes to their full potential.

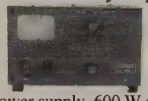
## *AMERITRON no tune Solid State Amplifiers*

***Ameritron ALS-500M Mobile no tune Solid State Amp has 500W out, covers 1.5-22 MHz***

ALS-500M
**$699.95**
AES PRICE

**Ideal** Mobile amplifier -- uses 13.8 Vdc mobile electrical system, very compact 3½x9x15 in., extremely quiet, 500W output, 1.5-22 MHz coverage, instant bandswitching, no tuning, no warm up, no tubes, SWR protected.

***Ameritron ALS-600 no tune Solid State base amp includes heavy duty power supply, 600 Watts out***



ALS-600
**$1129.95**
AES PRICE

**No** tuning, no fuss, no worries -- just turn it on and operate. *Includes* AC power supply, 600 W output, continuous 1.5-22 MHz coverage, instant bandswitching, *fully* SWR protected, extremely quiet, very compact. Amp is 6x9½x12 inches.

## *AMERITRON brings you the finest high power accessories!*

***CS-8V Remote Coax Switch . . . $139.95***

Replace 5 coax feedlines with a single coax. 1.2 SWR at 250 MHz. eable to 450 MHz. 1kW at 0 MHz. **RCS-4, $129.95.** position remote HF switch.

***ADL-1500 Dummy Load with oil . . . $59.95***

Oil cooled 50 ohm dummy load handles 1500 W for 5 minutes. SWR under 1.2 up to 30 MHz. Low SWR to 400 MHz.

***ICP-120/240-$79.95***

Stops power-up inrush current and absorbs momentary high voltage spikes to your amplifier. ICP-120 for 110-120V, ICP-240 for 220-240 V.

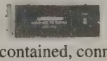
***ATR-15 Legal Limit Antenna Tuner . . . $369.95***

*Designed for legal limit amplifiers!* Covers 1.8-30 MHz, peak reading SWR/Wattmeter, 6 pos. antenna switch, 1:1 or 4:1 balun.

***ARB-700 amp-to-radio interface . . . $29.95***

Protects your costly transceiver from damage by *keying line transients*, steady state current and excessive voltages.

***QSK-5 Pin Diode T/R Switch . . . $329.95***



Self-contained, connects externally to most HF amps. Handles 2.5 KW PEP, 2 KW CW. Six times faster than vacuum relay. 6x4x9½ in.

**More hams use AMERITRON amps than any other in the world!**

Why? AMERITRON has earned a worldwide reputation for legendary quality, flawless performance, proven reliability and superb customer service . . . Call your favorite dealer for your best price and quick delivery!

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*. . . the high power specialists*

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**High Power amplfier parts quotes**: (601) -323-8211

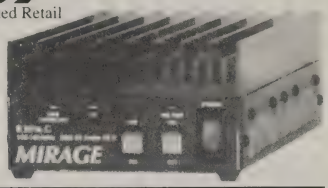
**Free Catalog: 800-647-1800**

*Web Site . . . http://www.ameritron.com*

# MIRAGE...160 Watts on 2 Meters!

***Turn your mobile, base or handheld into 160 Watt powerhouses and talk further, longer, clearer . . . All modes: FM, SSB, CW . . . Superb GaAsFET preamp . . . More!***

B-5016-G
**$269.95**
Suggested Retail




| *Power Curve* -- typical B-5016-G output power | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Watts Out* | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 |
| *Watts In* | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 |

***The MIRAGE B-5016-G gives you 160 watts of brute power for 50 watts input on all modes -- FM, SSB or CW!***

**Ideal** for 20 to 60 watt 2 Meter mobile or base. *Power Curve* chart shows typical output power.

**Hear** weak signals -- low noise GaAsFET preamp gives you excellent 0.6 dB noise figure. Select 15 or 20 dB gain.

**B-5016-G** has legendary ruggedness. *We know of one that has been in constant use since 1979!*

**Heavy-duty** heatsink spans entire length of cabinet -- prevents overheating. Power transistors protected by MIRAGE's *Therm-O-Guard*™.

**Fully** protected from high SWR and excessive input power. Has warning LED.

**Has** smooth adjustable Transmit/Receive switching with remote external keying.

**RC-1, $45.95,** Remote Control. On/Off, preamp On/Off, selects SSB/FM. 18-ft cable.

**Draws** 17-22 amps at 13.8 VDC. 12x3x5½ in.

***More 160 Watt, 2 Meter Amplifiers . . .***

**B-2516-G, $269.95.** For 10 to 35 watt mobile or base stations. 160 watts out for 25 watts in.

**B-1016-G, $339.95.** MIRAGE's most popular *dual purpose* HT *or* mobile/base amplifier. 160 watts out/10 W in. For 0.2-15 watt transceivers.

B-1016-G Great for ICOM IC-706!

**B-215-G, $339.95.** MIRAGE's most popular *handheld* amp. 150 watts out/2 watts in; 160 watts out/3½ W in. For 0.25 to 5 watt HTs.

## 144/440 MHz Amp
### *45/35 Watt Dual Band*

BD-35
**$149.95**

MIRAGE RUGGED!

| *Power Curve* -- typical BD-35 output power | | | | | | | |
|---|---|---|---|---|---|---|---|
| *Watts Out (2Meters)* | 30 | 40 | 45 | 45+ | 45+ | 45+ | 45+ |
| *Watts Out (440 MHz)* | 16 | 26 | 32 | 35+ | 35+ | 35+ | 35+ |
| *Watts In* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- *45 Watts on 2 Meters/35W on 440 MHz*
- *Auto Band Selection*
- *Full Duplex Operation*
- *FREE mobile bracket*
- *Single connector for dual band radios*
- *Reverse polarity protection*
- *Works with all FM handhelds up to 7 watts*
- *Auto T/R Switch • "On Air" LEDs*
- *5x1¾x5 inches*

## 35 Watts for 2 Meter HTs

B-34-G
**$89.95**

- *35 Watts Out-2 M • All modes: FM, SSB, CW*
- *18 dB GaAsFET preamp*
- *Reverse polarity protect • Works w/HTs to 8W*
- *B-34 . . . 35 W, FM only, less preamp . . $69.95*

### *Low noise GaAsFET preamps*

**High** gain *ultra low noise* GaAsFET preamps for receiving weak signals. Selectable gain prevents receiver intermod. 15 to 22 dB gain. Less than 0.8 dB noise figure. Automatic RF switching up to 160 Watts. **Choose** In-*Shack* model or *Mast-Mount* (includes remote control) model to reduce loss. Rugged die-cast enclosure.

| *Frequency (MHz)* | *In Shack $124.95* | *Mast Mount $174.95* |
|---|---|---|
| 28-30 | KP-1/10M | KP-2/10M |
| 50-54 | KP-1/6M | KP-2/6M |
| 144-148 | KP-1/2M | KP-2/2M |
| 220-225 | KP-1/220 | KP-2/220 |
| 430-450 | KP-1/440 | KP-2/440 |

## 100 Watts for 2 Meter HTs

B-310-G
**$179.95**

| *Power Curve* -- typical B-310-G output power | | | | | | | |
|---|---|---|---|---|---|---|---|
| *Watts Out* | 25 | 50 | 75 | 95 | 100 | 100+ | 100+ |
| *Watts In* | ¼ | ½ | 1 | 2 | 4 | 6 | 8 |

- *100 Watts out with all handhelds up to 8 watts*
- *All modes: FM, SSB, CW*
- *Great for ICOM IC-706*
- *15 dB low noise GaAsFET preamp*
- *Reverse polarity protection/SWR Protection*

***One Year Mirage Warranty***

**Free Catalog: 800-647-1800**

## 6 Meter Amplifier (50-54 MHz)

*FCC Type Accepted*

**The A-1015-G, $349.95,** is the *world's most popular* all mode FM/SSB/CW 6 Meter amplifier. 150 watts out for 10 in. For 1 to 15 watt transceivers.

# MIRAGE

COMMUNICATIONS EQUIPMENT
*300 Industrial Park Road*
*Starkville, MS 39759, USA*
*Technical: 601-323-8287 Fax: 601-323-6551*
*http://www.mirageamp.com*

# VECTRONICS®

***. . . the finest amateur radio products made!***

## World's most versatile 300W Antenna Tuner

VC-300DLP **$149.95** You'll get everything you've ever wanted . . . precise inductance control that rivals roller inductors . . . the ability to match any real antenna . . . full 1.8-30 MHz coverage . . . peak reading backlit Cross-Needle Meter . . . 8 position antenna switch . . . built-in 50 Ohm dummy load . . . finest components available and world class quality.

## More Fine Amateur Products

**AT-100 Tuned Active SWL Antenna . . . . $74.95**
CK-200 Deluxe CW Keyer w/Curtis chip. . . $74.95
**DL-300M 300 Watt Dry dummy load . . . . $34.95**
DL-650M 1500 Watt Dry dummy Load. . . . $64.95
**DL-2500 2500 W dry DL w/cooling fan - $179.95**
VC-300M 300 Watt Mobile Tuner . . . . . $99.95
**VC-300D 300 W Tuner/w digital graph - $179.95**
HPF-1 High Pass TVI filter 52-550 MHz . . . $19.95
**HPF-2 Deluxe high pass TVI filter . . . . . $24.95**
PM-30 1.8-60 MHz SWR/Wattmeter . . . . . $74.95
**PM-30UV 144/220/440 SWR/Wtmtr . . . . . $84.95**
LP-30 Low Pass filter, handles 1500 Watts . $49.95
**LP-2500 Low pass filter, 2500 Watts . . . . .$74.95**

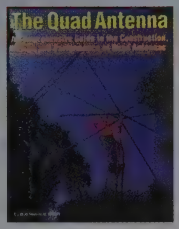
## 3 KW Roller Inductor Antenna Tuner with SSB Digital Bar Graph

HFT-1500 **$399.95** The VECTRONICS HFT-1500 has three continuously variable components -- two 4.5 kV capacitors and a roller inductor controlled by a precision crafted crank handle and a gear driven 5-digit counter. Tune any antenna 1.8-30 MHz, Lighted D'Arsonval Cross-Needle SWR/Wattmeter, 28 uH roller inductor, 4:1 2.5 kW balun and 20 segment SSB bar graph display.

*VECTRONICS, 1007 Hwy 25 S, Starkville, MS 39759 • Free Catalog 800-363-2922*
*• Tech: 601-323-5800 • FAX: 601-323-6551 • Visit our Web Site: http://www.vectronics.com*

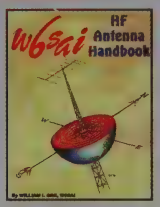
# CQ Books and Videos

### The Quad Antenna




Hams love antenna books and this book is no exception. Written by world renowned author Bob Haviland, W4MB, The Quad Antenna is the authoritative technical book on the design, construction, characteristics and applications of Quad Antennas. Discover how to easily build a quad antenna for your station that will help you fill your logbook with rare DX that you have only dreamed about before. **$15.95**

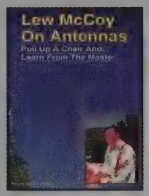
### The W6SAI HF Antenna Handbook




This is an antenna handbook unlike any other—written by one of ham radio's most respected authors, Bill Orr, W6SAI. Jam-packed with dozens of inexpensive, practical antenna projects that work, this invaluable resource will guide you through the construction of wire, loop, yagi, and vertical antennas.

**$19.95**

### McCoy on Antennas




CQ magazine author and acclaimed authority on antenna theory and design, Lew McCoy, W1ICP, has written a truly unique antenna book that's a must for every amateur. Unlike many technical publications, Lew presents his invaluable information in a casual, non-intimidating way. It's not just an antenna handbook, but a wealth of practical antenna advice for the ham! **$15.95**

### The Vertical Antenna Handbook

Take advantage of the 20 years of research and practical experience of naval communications engineer Capt. Paul H. Lee, USN(ret), N6PL. Learn the basic theory, design, and practice of the vertical antenna. Discover easy construction projects such as a four-band DX vertical or a broadband array for 80 meters. Ever wonder how to build a functional directive vertical system? Paul Lee can get you started today!

**$9.95**

### 1997 CQ Amateur Radio Almanac, 4th Edition

The most comprehensive information resource about Amateur Radio. Now in its 4th year, the CQ Almanac is filled with over 600 pages of data, photos, charts, graphs, maps, rules, history. Includes Ham satellites and frequencies, Extra Class question pool, index of equipment reviews, Ham Radio on the Web, comparison charts for HF and VHF equipment, operating tutorials, antenna specs, propagation forecasts, and much more than we could possibly tell you about here. **$19.95**

## Get Started with CQ's Video Library!

### Getting Started in Contesting

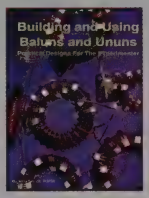
For the newcomer to contesting or an experienced veteran, this video is for you! You'll get advice and operating tips from some of contesting's most successful competitors. Here's just a sample of what you'll see: what contesting's all about, tips for beginners, how to compete from a small station, operating secrets from the "pros", live QSOs from world class stations, VHF/UHF contesting. **$19.95**

### Getting Started in VHF

This is the ideal introduction to operating on VHF. See demonstrations of the latest radios. Also, learn about repeater usage as well as the more exotic VHF operating modes. Whether you are interested in packet radio, satellite operation, or using your local repeater, this is your video!

**$19.95**

### Building and Using Baluns and Ununs




Written by world-renowned expert Jerry Sevick, W2FMI, this volume is the definitive source for his latest practical information and designs on transmission line transformer theory. W2FMI has unraveled the technological mysteries with designs that are simple and work. Discover new applications for dipoles, yagis, log periodics, beverages, antenna tuners, and countless other examples. **$19.95**

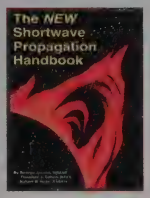
### Getting Started in Packet Radio

This video will help de-mystify the fascinating but sometimes confusing world of packet radio. Learn how to get started using your computer on the radio. Included are step-by-step instructions on making packet contacts and using packet bulletin boards, networks and satellites. **$19.95**

### Getting Started in Amateur Satellites

Learn how veteran operators set up their satellite stations. Learn how to locate and track ham satellites with ease. Watch operators access satellites and contact far ranging countries around the world. This video is filled with easy to understand advice and tips. **$19.95**

### The NEW Shortwave Propagation Handbook

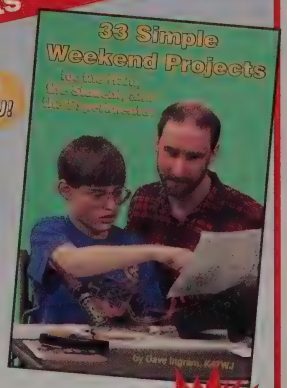



*CQ* has been a leader for nearly 50 years in providing timely and invaluable information on HF propagation. Thousands of radio amateurs were helped by our first propagation handbook. Now, you can take advantage of the information and techniques presented in this completely updated and revised volume. It's certain to be one of ham radio's classics—and one that will immediately increase your enjoyment of the HF spectrum.

**$19.95**

## New from CQ: 33 Simple Weekend Projects

**ALL NEW FUN FROM DAVE INGRAM, K4TWJ!**

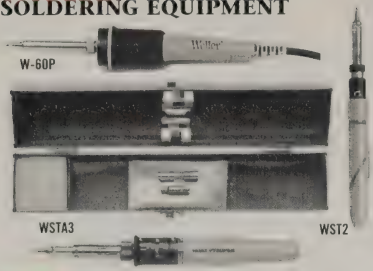



"33 Simple Weekend Projects for the Ham, the Student, and the Experimenter" gives only a hint at the fun and satisfaction to be found between the covers of this little book. Dave Ingram, K4TWJ, has pulled together a wide ranging collection of do-it-yourself electronics projects from the most basic to the fairly sophisticated, and even touching on the frivolous. You'll find an interesting and very do-able array of useful devices: station accessories for VHF FMing, working OSCAR satellites, joining the fun on HF, trying CW, building simple antennas, even a complete working HF station you can build for $100. Add a measure of practical tips and techniques on how to build electronic projects yourself, and you've got an information-packed book that will keep the newcomer or the most experienced home-brewer busy for many a pleasant weekend.

**Only $15.95**

***Order Your CQ Products From AES Today!***
***Toll-Free 1-800-558-0411***

## WELLER
## SOLDERING EQUIPMENT

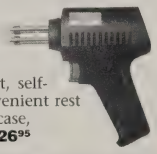



**W-60P** 60-W Pencil-type Soldering Iron For most circuit work. Supplied with 1/16" 700°F screw-driver tip. Only 7½" long, 2½ oz., 6 ft. cord, 120V.... **$59.95**

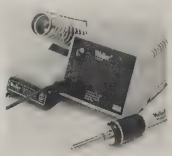
**WP-25** 25W Pencil-type Soldering Iron For work on delicate electronic circuits. 750°F tip temperature. 7⅞" long, 1¾ oz., 4 ft. cord, 120V AC..... **$31.95**

**WSTA3** Pyropen® Butane Soldering Iron Lightweight and completely portable. Operates for up to 3 hours on a charge of cigarette lighter butane. Soldering temperature control is adjustable from 392° to 932°F, with fast heat-up time It's ready to solder in just 30-seconds! Supplied with tips for soldering, hot air (1202°F), and brazing ..... **$89.95**

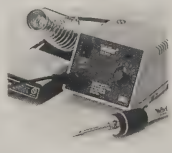
**WST2** Pyropen® Jr. A portable mini butane powered soldering iron. Recharges in seconds from a regular cigarette lighter butane container. Soldering temperature is adjustable from 392° to 842°F. Also, hot blow feature (806°F) and torch feature ( 2372°F). Comes with handy pocket clip ..... **$69.95**



**7200PK** Soldering Gun Compact, lightweight, 75 watts. Handles connectors and almost any other heavier soldering job. The flat, self-supporting back acts as a convenient rest when not in use. Carrying case, extra tip & solder. 120V ..... **$26.95**



**WTCPT** Controlled Output Soldering Station This pencil iron is safe for soldering. ICs. Power unit with unitized on-off rocker switch with indicator light. Storage tray holds extra tip and tip cleaning sponge..... **$109.95**



**EC-1002-1** Soldering Station Compact! Soldering pencil stand connects to right or left side of unit. Variable temperature, indicator light, self feeding reservoir. Handy tray stores extra temperature sensing tips..... **$199.95**

## WAHL
## SOLDERING EQUIPMENT

**7740** Cordless Soldering Iron Tip performance up to 50 watts and over 700°! Contains a premium nicad battery for high-rate charging; a partially discharged unit will return to full capacity within 1 to 2 hours, with a complete recharge in 3-4½ hours. Replaceable battery and worklight. Comes with recharging stand, fine and heavy tips ..... **$39.95**

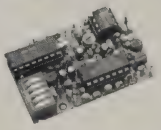
## RF Products

**199-416 BNC Magnetic Mount** Improve mobile HT performance! Get the RF outside of the vehicle. Simply attach the rubber duck antenna from your HT to this handy magnetic mount and place it outside, on the roof or trunk, where it can radiate without obstruction comes with 10 ft. coax and BNC connector ...**$17.95**

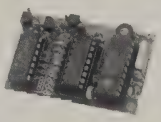
## Communications Specialists
## TONE ENCODER & DECODERS

**SS-32P** Programmable CTCSS Encoder On board DIP switch programs 32 EIA tones from 67 to 203.5 Hz. Micro, fits inside most transceivers. 0.9" x 1.3" x 0.4", 6–30 VDC ..... **$28.95**

**SS-32SMP** Programmable CTCSS Encoder Super small for easy installation in most HTs. Standard with 32 EIA tones between 67 and 203.5 Hz. Individual tones are selectable by soldering binary coded jumpers. 0.53" x 1.0" x 0.16", requires 6–15 VDC..... **$27.95**



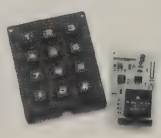
**TS-32P** Field programmable CTCSS Encoder-Decoder DIP switch programmable for 32 EIA tones from 67 to 203.5 Hz. 1¼" x 2", 0.4", 6–25 VDC..**$57.95**



**DTD-1** DTMF Decoder Small, high quality and low cost. Decodes any one of 5,040 4-digit codes to provide a latched or momentary open collector output for single function operations. 1¾" x 2" x 0.4", requires 6–12 VDC..... **$49.95**

**TE-32** Multi-tone Encoder Provides direct access from a front dial rotary switch to all EIA CTCSS tones from 67.0 to 203.5Hz, allowing users to access various repeaters Great for mobile or test bench. 5¼" x 3.3" x 1.7", 6–30 VDC..... **$49.95**

**TE-64** Multi-purpose Encoder Provides 64 frequencies include 32 sub-audible, 19 burst-tone, 8 Touch-Tone® & 5 test frequencies. Separate outputs for high and low frequency ranges. 4⅝" x 3.3" x 1.7", 6–30 VDC .... **$79.95**



**ID-8** Multi-Featured Automatic Morse Station ID'er Programmable via 12-button keypad. Eight changeable messages, 200 characters total. CW speed: 1-99 wpm; ID interval timing: 1-99 minutes; ID hold-off timing: 0-99 seconds; CW tone: 100-3000Hz. Board: 1.85" x 1.12" x .0.35"..... **$69.95**

PRIMECO™ PERSONAL COMMUNICATIONS

## PCS DIGITAL PHONES

**Providing a level of call quality previously unheard of in wireless – Less static & fewer dropped calls. Calling that's so clear, it almost sounds like a home phone.**

**Features**

• Operates on the new 1.8GHz PCS band • Crystal-Clear Voice Quality • Lithium Battery – talk up to four hours on receive calls for up to two days without recharging • Caller ID • Call Restriction • Voice Mail with Mail Notification • Call Waiting • Call Privacy Anti-Fraud Control • No Long-Term Service Contracts • No Activation Fee

**Now available thru AES® Milwaukee.**
**At this time service is available in limited areas.**
**Please CALL for more information**

**Order Toll Free 1-800-550-0411**

**Use your Credit Card for Same Day Shipping**

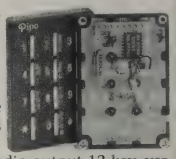
## PIPO Communications
## HIGH QUALITY DTMF ENCODERS

- 12-digit or 16 digit pads
- Steel Keys
- Sealed Gold Dome Contacts
- Self-contained
- NO RFI
- Simple 3-wire connection
- Voltage 8.5 to 16V DC
- Temperature -22 to +160 F
- Adjustable level and timing
- Front panel adjustable
- Includes template, hardware and schematic

PK-1 2.65"h x 2"w x .045" • PK-2 2.65"h x 2.5"w x 045"d

**K-Series option:** features a built-in keying circuit & relay to automatically key a transmitter or other system. When any key is depressed, a relay closes for O–3 seconds, time is adjustable with a trimpot.

**M-Series option:** a special encoder package for mounting any PK-1/1K, PK-2/2K PIPO encoder to surfaces that are inaccessible from the rear such as walls, mobile dashboards, panels, etc. Consists of a frame which secures to the mounting surface with the encoder press-fitting into the frame.



**P-7V** Features similar to the K-Series but rugged-design for the demanding Land Mobile Industry. The choice for radios or systems exposed to harsh or abusive environments. Features miniature electronic design, low distortion, adjustable audio output 12-key, vertical. format, 2.16"h x 1.50"w x 0.20"d.

See PIPO in the Price List

## X-10 ACTIVEHOME™

## Wireless Home Security

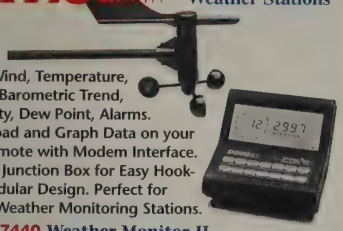
X-10 is a leader in the field of wireless home security and home automation. AES and this industry leader have teamed up to bring you these state-of-the-art products. What better way to protect your family and your electronic equipment. AES has complete systems or you can design your own from the list of X-10 products & accessories.

The home security will monitor doors and motion sensors can cover wide areas in or around your house. You can even have the system call a friend or neighbor if its activated. You can ward off potential problems with the sound of REX. Rex is a fierce sounding barking dog, but he requires no food.

Home automation is here now and we have it for you. Hot coffee automatically in the morning, turn lights on and off automatically or at the push of one button. Turn the heat up and down The X-10 can also be setup to run from your PC!

**In stock at all AES stores**

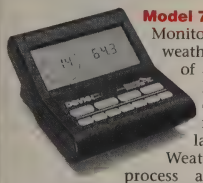
## DAVIS Computerized Weather Stations



Gives Wind, Temperature, Rain & Barometric Trend, Humidity, Dew Point, Alarms. Download and Graph Data on your PC – remote with Modem Interface. Central Junction Box for Easy Hook-up, Modular Design. Perfect for NOAA Weather Monitoring Stations.

**Model 7440 Weather Monitor II**
Top-of-the- line Personal Weather Station that combines all weather monitoring functions and a 12 or 24 hour clock with date, into one package and shows them on an easy-to read, back lit, 1¼" x 4¾" LCD display. **Temperature:** Indoor, from 32°F to 140°F **Wind:** Wind Direction in 1° or 10° increments • Speeds to 175 mph • High Wind Speed • WInd Chill to –134°F • Low Wind Chill **Barometer:** Barometric Pressure (with memory recall) • Trend arrow **Humidity:** Inside Humidity 0% to 95% (outside optional) • High and low Humidity **Alarms:** Temperature, Wind Speed, Wind Chill, Humidity, and Time. Barometric trend alarm for change >02, .04, or .06 inches of mercury in an hour **Other Features:** Compact, just 5¼" x 5⅞" x 3" • Scans selected functions • Metric/U.S. units • AC operation w/battery back-up • Use on desk, shelf or wall..**$349.95**

**External Temperature/Humidity Sensor** For the 7440; measure outside humidity, dew point and temperature. Comes with 40 ft. cable **Model 7859 $109.95**



**Model 7425 Weather Wizard III**
Monitor both Indoor and Outdoor weather conditions at the touch of a button on the 1¼" x 4¾" LCD display. With the optional Rain Collector, measure daily and accumulated rainfall. Optional Weatherlink software will process and store weather data through and IBM® compatible PC or Macintosh®. With anemometer, external temperature sensor, junction box, cables & AC adapter.
**Temperature:** Indoor, 32°F to 140°F • Outdoor, –50° F to 140° • High and Low Temperature **Wind:** Direction in 1° or 10° increments • Speeds to 175 mph • High Wind Speed • Wind Chill to –134°F • Low Wind Chill **Alarms:** Temperature • Wind Speed • Wind Chill • Time. **Other:** Compact, just 5¼" x 5⅞" x 3" • Scans selected functions • Metric or U.S units • AC operation with back-up • Desk, shelf or wall mount..... **$169.95**

**Model 7415 Weather Wizard IIS™**
Like Weather Wizard III, except does not indicate Wind Direction, and the LCD display is smaller.....**$129.95**

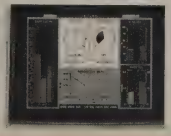
**Rain Collector II** For 7440, 7425 & 7415; read both daily & acumulated rainfall in 0.01" increments. Comes with 40 ft. interconnecting cable .. Model 7852 **$69.95**

**Model 7400 Perception II**
Monitors indoor climate, looks similar to Weather Wizard III. **Functions:** Temperature 32°F to 140°F • High/Low Temperature Barometric Pressure w/Memory Recall • Humidity • Highs & Lows recorded with time & date • **Alarms:** temperature, humidity, time, barometric change >.02, .04, or .06 inches of Hg/hour • 12 or 24 hour clock with date • Back lit display ....**$129.95**

**40 ft. Extension Cables**
4-conductor, for anemometer, ext. temperature sensor, rain collector, or weatherlink..... Model 7876 **$18.95**
6-conductor, for use with the external temperature and humidity Sensors, only ..... Model 7878 **$22.95**

**Model 281 Wind Wizard™**
**Wind Speed Indicator**
Handheld unit accurately measures wind speed from 0-60 MPH. No batteries required..... **$44.95**

**WEATHERLINK® 4**
**Software for windows**
Link Perception, Weather Wizard, or Weather Monitor to an your computer. Create graphs, calculate average conditions, generate summaries, analyze trends, more.



See DAVIS in the Price List

## AES® IBM™- PC Compatible
# PENTIUM BASED COMPUTER SYSTEMS

• Mini or Mid-Tower with Pentium Performance for the user that wants more • The complete computing solution • A True Plug & Play System • Perfect for dedicated Packet or running your small business, etc. Highest Quality • Fully upgradable • Maximum Performance

**Model EL-1 $799.95**
- Mini Tower
- Pentium Motherboard
- 133 MHz CPU
- CPU Fan
- 16 Mb Ram
- 3.5" Floppy Drive
- 1.2 gb Hard Drive
- S3 Video, 1 Mb
- Keyboard
- Mouse
- Windows 95 Installed

**Model MM-1 $1299.95**
- Enlight Mid-tower
- Pentium Motherboard
- 166 MHz CPU
- 16 Mb Ram
- 3.5" Floppy Drive
- 2.1 gb Hard Drive
- S3 3D Video, 2 Mb
- Windows 95 Keyboard
- Mouse
- Windows 95 Installed
- 12x CD Rom Drive
- Sound Card
- Amplified Speakers
- Mouse Pad
- Game Pak

*EL-1 & MM-1 One Year Parts & Labor Limited Warranty*

*Options for Both Models*
14" Monitor.... **$239.95** Tape Drive ..... **$159.95**
15" Monitor.... **$329.95** Modem ..... **$149.95**

## MAGELLAN
Navigation & Communications

**Global Positioning Satellite (GPS) brings Satellite Navigation within reach of everyone! For navigation, hunting, etc. – tells you where you are, and how to get back. Interfaces with GPS capable TNCs for APRS packet operation. Check location of transmitter sites, repeaters and get data for satellite and moonbounce work. Calculates the phase of the moon, and sunrise/sunset for anywhere on earth!**

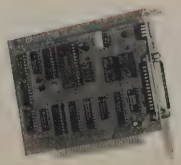
GPS2000 GPS4000XL Meridian XL

**Magellan GPS-2000 Satellite Navigator**
• Four convenient, easy-to-understand graphic navigation screens • Displays distance to go, direction, time to go, speed, course correction and other data • 100 user-entered landmarks • One reversible route of up to 29 legs • Displays position information in Latitude & Longitude or UTM coordinates • Crisp, backlit graphic display • Waterproof, rugged and durable case • Highly sensitive built-in antenna • Up to 24 hours of continuous battery life on 4-AA alkaline batteries • Hand-held, light weight, only 10 ounces and 6.6"h x 2.3"w x 1.3"d • 14°F to 140°F operating temperature range..... **$149.99**

**Magellan GPS-4000XL**
Gets you there and back again with enhanced features: • 24-hour continuous use battery life • Allview 12 GPS technology – tracks 12 satellites • Waterproof construction • Rubberized armored housing & scratch-proof display • Mapping features, PC upload/download capability with optional kit • Seven graphic navigation screens; two customizable • Full-featured track plotter with landmark projection • Save 200 landmarks and 5 routes with 20 legs • Ability to attach a 20-character message to 25 landmarks • Auto back-track feature • NMEA output 0183 and DGPS ready • Sunrise, sunset and lunar calculations • Latitude/Longitude, UTM, OSGB and other coordinates systems • 14°F to 140°F operating range • Simulator for training • Pocket size, only 6.6"h x 2.3"w x 1.3"d, 10 oz ..... **$249.95**

**Magellan Meridian XL**
Six, customizable, easy-to-follow graphic navigation screens • Widescreen backlit display with ultra-large, bold characters for easy viewing • Detachable antenna, large keys & non-skid rubber grips • Position & waypoint information displayed in LAT/LON and TDs • Full-featured track plotter with adjustable scale, waypoint information, Pan & Scan and "Go To" features • Displays distance to go, bearing, COG, time to go, SOG, XTE, VMG & other data • "Go To with MOB function • 200 user entered waypoints with 9 selectable icons • Waypoint projection and nearest waypoint search • Five reversible routes of up to 15 legs • Sunrise/sunset/lunar calculations • External alarm support • Ships with mounting bracket, carrying case, 10-35VDC power/data cable, lanyard strap • Up to 6 hours continuous of operation and 24 hours in battery saver mode, on 3-AA batteries. • Rugged,durable, waterproof •14 oz – 6.13"h x 3.5"w x 1.3"d .... **$299.95**

## UNIFIED MICROSYSTEMS



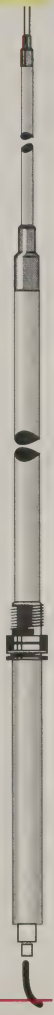
**W9XT Contest Card for IBM™ & PC Compatible** A non-volatile 5" x 4½" card that plugs-into a single 8-bit PC slot and provides voice recording, playback & CW keying. Stores 16 seconds of high quality and natural sounding voice audio sampled at 8kHz, which can be partitioned between 4 messages of different lengths. Does not use any disk space. On CW, the card frees up the PC port, and a relay allows operation with positive or negative-keying. Works with all rigs and is compatible with popular logging programs..... **$139.95**

**Contest Card Cable Semi-kit** Comes wired & tested except for connectors to microphone & transmitter. 6 ft. shielded cable, includes CW keying line and record switch. Specify 4 or 8-pin..**$44.95**

# A-99

## 10 meter Base Antenna by SOLARCON

### TWIN RING ADJUST-A MATCH TUNING



The **A-99** is a Half wave over a Quarter wave, variable mutual inductance tuned antenna for 10 to 17 meters.

It's **economical** and **easy to use!** — it features the **SOLARCON** Twin tuning, which makes it possible to tune the input to the antenna and obtain the optimum SWR over a wide range of frequencies. The optional GPK-1 Ground Plane Radial Kit makes it perform even better!

**Simple Tuning!** — raising the tuning rings raises the frequency and lowering the rings lowers the resonant frequency.

**A real beauty!** — rugged three-piece white fiberglass construction with triple plated brass fittings. It's easy to assemble and install.

### Specifications:

| | | | |
|---|---|---|---|
| Height | 17 ft. 8 in. | Radiation Angle | <20° |
| Sections | 3 | Grounding | DC Ground |
| Bands | 10–17 meters | Mounting | 1-1/2" mast |
| Gain | 3 dBi | Coaxial Cable | 52Ω |
| Power Limit | 2000W | Connector | SO-239 |

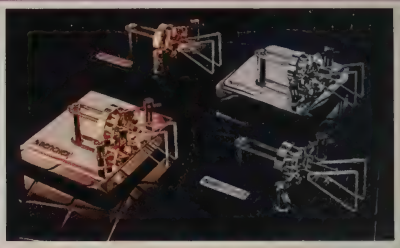
**A-99 Antenna $59.95** — **GPK-1 Radial Kit $39.95**

## Palomar Engineers

**PK-200B** All Brass Dual Paddle Iambic Key Made by Jones of England. Smooth, solid iambic action. Adjustable spring tension, paddle height & spacing. Gold-plated contacts, serial # ..... **$209.95**

**PK-203** All Brass Single Paddle Key Like PK-200B but single paddle for non-

**TOP TRADES**
**for clean, late model SSB & FM Gear**
**Call for our Quote Today!**



**"RJ" HAND MORSE KEYS** A superb and responsive instrument which will bring new pleasure to traditional Morse keying. Features include oil impregnated sintered bearings at pivot points to impart friction-free pivoting and wobble-free vertical tracking. Stainless steel locking screw allows individual adjustment for arm height, tension and contact spacing. Black "Navy" style knob with removable skirt gives a solid feel with outstanding tactile feedback, Heavy metal base available in black texture or chrome finish with anti-skid rubber feet
**RJ-1** Black base **$81.95** • **RJ-2** Chrome base **$94.95**

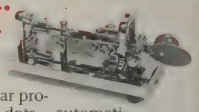
**IAMBIC & SINGLE LEVEL PADDLES** Highest quality, offering precise control, reliability and years of trouble-free operations. Wide-range adjustment of tension and contact point spacing. Self adjusting needle bearings, gold-plated solid silver contact points, and polished acrylic plastic paddles. The Main frame, contact post, spring posts and bearing ring are all precision machined from solid brass, then chrome or gold plated for durability and rich appearance. Heavy steel base with non-skid feet.
**BY-1** Black base **$79.95** • **BY-2** Chrome **$94.95**
**BY-3** Gold **249.95** • **BY-4** Black, Gold comp. **$149.95**

**MFJ-422C** Keyer-Paddle Combination This Keyer unit installs on top of a Bencher Iambic Paddle. If you already have a Bencher paddle, buy just the keyer unit. Uses famous Curtis™ keyer chip. Speed is 9–50 wpm, it has adjustable weight and tone, dot-dash memories, sidetone. Semi-automatic & tune or automatic modes. Keys grid block, cathode or solid state. Uses 9V battery or AC adapter. 4⅛" x 2⅝" x 5½"d..**$124.95**
**MFJ-422CX** Keyer only ..... **$74.95**

**MFJ-407C** Deluxe Electronic Keyer Features dot-dash memories, self completing dots and dashes; jam-proof spacing. RF proof, instant start. Single squeeze, or straight key. Front panel controls: speed, weight, tone and volume, ON/OFF, tune, auto/semi-automatic. Selectable A or B-type iambic keying. Built-in speaker, uses 9V battery, or MFJ-1312B AC adapter. 7" x 2" x 6"d..... **$64.95**
**MFJ-401C** Econo Electronic Keyer II Similar to MFJ-407C but with external speed and volume controls, internal weight and tune controls. Uses 9V battery or MFJ AC adapter..... **$49.95**

**MFJ-492** Menu Driven Memory Keyer No keypad, no complex sequences to remember. Just follow the menu! Save and play messages; decrement serial #s; set speed, weight, sidetone; enter iambic, semi-auto, handkey, message queue, paddle command modes; turn on/off sidetone, transmitter tune, keying output on/off; select iambic A or B, reverse paddle, Morse trainer, and store starting serial number. Holds 192 characters in 4 soft sectored message memories, expandable to over 8K characters in 8 memories with lithium battery back-up. Front panel controls for speed (5–100 WPM) and volume, built-in sidetone speaker. Direct and grid block keying output. Uses 9V battery or opt.110V AC adapter. 6½" x 2½" x 6¼" ..... **$89.95**
**MFJ-493** All features of the MFJ-492, but with 32K memory. IBM keyboard input, serial port for computer interface and QSO simulator ..... **$129.95**
**MFJ-451** Morse Keyboard A stand-alone CW keyboard with 200 character type-ahead buffer, and two 100 character messages. Requires 12VDC or MFJ-1312B 110VAC adapter ..... **$89.95**
**MFJ-452** Morse Keyboard with 16 character LCD display. Comes with keyboard..... **$119.95**

## VIBROPLEX®



**Original "Bug"** Press the thumb piece to the right, and the vibrating bar produces one, or a string of dots – automatically. Dashes are made to the left – manually. A sliding weight adjusts the speed for 20 wpm or less. Silver contacts, non skid feet. **Standard model** has painted base and chrome top parts, **Deluxe model** has polished chrome base and top parts and fine jewel movements for smooth operation.
**Standard (#110) $139.95** • **Deluxe (#105) $174.95**
**Gold (#090) $279.95**

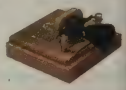
**Original Presentation** The finest quality semi-automatic key available. It offers real jewel movements & widest speed range from less than 20 to 55 wpm, plus bright chrome parts mounted on a 24-caret gold-plated base plate..... (#100) **$239.95**

**Vibrokeyers** Single lever paddle (top) initiates the automatic dots and dashes of an electronic keyer. Dual paddle Iambic model allows automatic dot & dash insertion. **Standard:** black base, chrome parts. **Deluxe:** chrome base & top parts, jeweled movements. **Presentation:** 24k gold-plated steel base with triple chrome-plated parts parts & jeweled movements.

**Single Paddle:**
**Standard (#120) $129.95** • **Deluxe (#115) $169.95**
**Gold (#113) $259.95**

**Iambic Paddle:**
**Standard (#135) $129.95** • **Deluxe (#130) $169.95**
**Gold (#123) $259.95** • **Presentation (#125) $229.95**

**Brass Racer Iambic** A solid brass Iambic paddle mounted on a polished hardwood base (#145) **$89.95**
**EK-1** Solid brass Iambic paddle with an 8044 electronic keyer built into the hardwood base. Iambic, dot & dash insertion, adjustable speed ..... (#140) **$144.95**



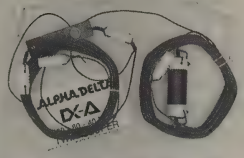
**Square Brass Racer** Solid lacquered brass Iambic paddle on a polished hardwood base. Magnetic action, no springs! .(#150) **$129.95**

**Order Toll Free 1-800-550-0411**
**Use your Credit Card for Same Day Shipping**

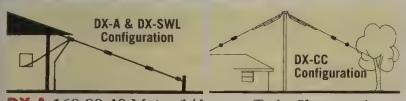
# Solving your Antenna and Lightning Problems!

## Limited Space High Performance Antennas

**Unlike the usual trap antenna, there are no capacitors to break down under high RF voltages. "ISO-RES" inductors & 12 ga. insulated solid copper wire tolerate full-legal power. 50Ω direct coax feed; a tuner usually not required when operating in the resonant bands, but may be used for multi-band work.**



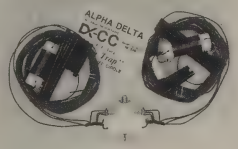

- NO-TRAP DESIGN
- STAINLESS STEEL HARDWARE
- FULLY ASSEMBLED
- SEVERE WEATHER RATED
- NO-TRAP DESIGN




**DX-A** 160-80-40 Meter 1/4-wave Twin Sloper • A top low frequency DX antenna. Combines the tremendous DX firepower of the 1/4-wave sloper with the wide bandwidth of the 1/2-wave dipole. One leg is 67 ft., the other 55 ft. Installs like an Inverted-V with ground return accomplished thru tower or down-lead .. **$59.95**

**DX-B** 1/4-wave DX sloper • Single wire with high performance on 160, 80, 40 & 30 meters. Designed for limited space installations where room doesn't allow for the DX-A twin sloper. Requires only 60 ft. overall and provides amazing DX performance at installation heights of only 35 ft., and with the low end at only 8 ft. Pre-assembled & Pre-tuned. – just put it up and start enjoying low band operation. Utilizes stainless-steel hardware, 12 gauge solid copper wire and efficient Alpha Delta *"Iso-Res"* RF choke coils. To gain the same broadbanded performance like the DX-A, the DX-B is also designed to be used with a wide range antenna tuner, so no trimming or tweaking is necessary. 50Ω coax feed, rated for full legal power ..... **$69.95**

**DX-SWL** SWL Broadcast Sloper • Covers the 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90, and 120M short-wave bands plus the AM broadcast band. Sloper design provides outstanding reception of low-angle DX signals. Multi-band 2KW transmit capability with an appropriate antenna tuner. Overall length is 60 ft..... **$79.95**




**DX-CC** *"No-Trap"* 80-40-20-15-10 meter dipole or inverted-V. Overall length is 82 ft..... **$119.95**

**DX-DD** *"No-Trap"* 80 and 40 meter dipole or inverted-V. Overall length is 82 ft..... **$89.95**

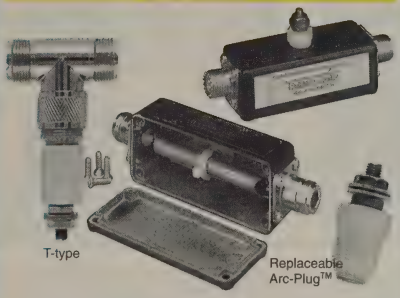
**DX-EE** *"No-Trap"* 40-20-15-10 meter dipole or inverted V. Also covers 30-17 & 12 meters with an antenna tuner. Overall length is 40 ft ..... **$99.95**

**DX-Series Monoband Dipoles**

Full-size dipoles utilizing the Delta-C Center Insulator with built-in Arc-Plug® Static Electricity Protector. Fully assembled using 12 ga. insulated high-strength solid copper wire, CIN end insulators & 50 ft. nylon support rope. Feed with coaxial cable or open-line, rated for legal power.

**DX-80** For 3.5MHz (75-80M band), 133 ft. long **$49.95**
**DX-40** For 7 MHz (40M band), 66 ft. long ..... **$39.95**
**DX-20** For 14 MHz (20M band), 33ft. long ..... **$39.95**

## Transi-Trap® Surge Protectors




**Alpha Delta Transi-Trap Surge Protectors** are gas surge arresters which will protect your valuable ham equipment much more effectively than the lower cost air-gap types.

The heart of the unit is the Arc-Plug™, which consists of two electrodes hermetically sealed in a gas filled ceramic cylinder. It acts like a voltage dependent switch that can repeatedly carry large currents for brief periods of time. When a voltage surge occurs on your transmission line, an arc forms between the electrodes allowing it to conduct harmlessly to an independent ground connection, reducing feedline voltage to less than 30 volts. That's protection!

Transi-Traps are the choice of the U.S. Military, and government agencies, worldwide. Transi-Traps are designed for 50Ω coaxial cable and are available with standard SO-239 connectors or N-type connectors which extend operation through 1 GHz.

**Model RT** Rated at 200W thru 500 MHz... **$36.95**
**Model RT/N** Rated at 200W thru 1GHz..... **43.95**
**Model HV** Rated at 2KW thru 500 MHz ..... **39.95**
**Model HV/N** Rated at 2KW thru 1GHz ..... **46.95**
**Model LT** "T"-type, 200W thru 30 MHz ..... **29.95**

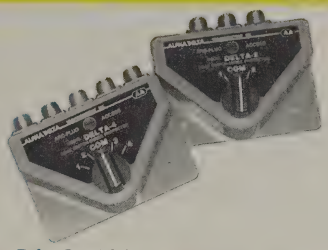
**DX-LB** Low Band Dipole • Covers 160-80-40 meters with an overall length of only 100 ft. Antenna performance and 2:1 VSWR bandwidth is site dependent and varies with height above ground and surrounding objects. The typical bandwidth is:

160M – 20kHz • 80M – 40 kHz • 40M – 300 kHz

Full band coverage can be accomplishedwith an antenna tuner. Built with insulated 12ga. wire, stainless steel hardware and uses the Model DELTA-C static protected center insulator and CIN end insulators. Use coax or open wire line and configure as a dipole or inverted-V. Assembled and ready to go! .....**$119.95**

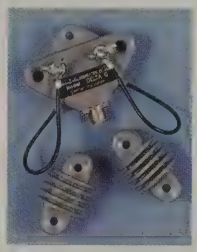
**DX-ULTRA** Shortwave Dipole Antenna • Covers AM Broadcast through 30MHz. Provides efficient, low-noise, broadband performance for Medium Wave, Tropical, International SW, Military, Government, Embassy, Maritime, Aircraft, Commercial and Utility frequencies. *ISO-RES* inductors, parallel wire elements and the exclusive DELTA-C Center Insulator with the built-in ARC-PLUG® Static Electricity Protector. Over all length is 80 ft.; may be installed as a dipole, inverted-vee, or full sloper. It can be used with an antenna tuner as a transmit antenna up to 2kW. Connectors will accept either coaxial cable or balanced line. Comes fully assembled, ready to go!..... **$119.95**

## Lightning Surge Protected 2 & 4 Position Coax Switches



Alpha Delta Coaxial Antenna Switches are made only in the U.S.A. The extremely high quality custom design features a cast housing with a constant impedance micro-strip cavity for outstanding performance through UHF. No lossy wafer switches are used, and a solid positive detent roller bearing switch drive leaves no-doubt to which position is selected.The unused antenna circuits are automatically grounded to reduce antenna interaction, noise and the effects of lightning. For the antenna circuit that is in use, the famous replaceable **Alpha Delta Arc-Plug™ Cartridge** provides continuous protection. Antenna switched in or out, you're well protected both ways! The Arc Plug is easily accessed through front panel so you may permanently mount the switch to any surface. Both the two and four position models handle full legal power.

**DELTA-2** 2-position coaxial switch with SO-239 connectors, rated for up to 500MHz.. **$49.95**
**DELTA-2/N** 2-position coaxial switch with N-type connectors, rated for up to 1.3 GHz. **$64.95**
**DELTA-4** 4-position coaxial switch with SO-239 connectors, rated for up to 500MHz.. **$79.95**
**DELTA-4/N** 4-position coaxial switch with N-type connectors, rated for up to 1.3 GHz. **$89.95**



## Antenna Hardware Kit

Don't assemble your next dipole antenna without one of these CENTER and END insulator combos. They're designed for strength, and to provide equipment protection with a built-in replaceable SEP Arc-Plug® Static Electricity Protector. Ideal for dipoles, Vees, zepps and all kinds of SWL receive antennas. Feeds with either coax or balanced line. Rated for full legal power.

The **SEP Arc-Plug** protector which is mounted in the DELTA-C center insulator "bleeds off" slow rising static electricity charges routing them harmlessly to ground, before they can enter the shack thru the feedline. This is far more effective than DC grounded baluns or chokes, which can be "popped" by static charges. Dangerous static charges are developed from thunderstorms, high wind driven snow or desert sand, and have been measured to 1,000's of volts; so potent, they can puncture the dielectric of unterminated coax.

The **DELTA-C center insulator** and **DELTA-CIN** end-insulators are fabricated with an extremely rugged UV and RF resistant DELTALLOY material that is so tough, you can drop it off a roof without damage. Don't rely on fragile ceramic or glass insulators! Only stainless steel hardware used in the center insulator for salt air and other corrosive environments, and all internal connections are hard soldered.

DELTA-C Antenna hardware kit • Contains Center insulator, (2) end-insulators & SEP ARC-PLUG Protector ..... **$29.95**
DELTA-CIN End-insulators (separate) .. ea. **$1.95**

# ALPHA DELTA COMMUNICATIONS, INC. (AA)

# OUTbacker

## HF Mobile Antennas

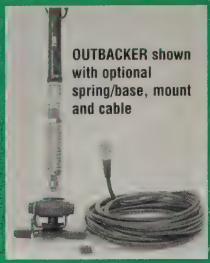
• HAM – MARS – CAP– MARINE/ITU • LOW SWR
• WIDE BANDWIDTH • NO CHANGING COILS

**It's plug-n-play!**

## Performance *plus* Convenience...

including HF + 6&2M

Whether mobile... or backpack portable!



OUTBACKER shown with optional spring/base, mount and cable

**The OUTBACKER** – Constructed of fiberglass with pretuned copper helical windings and covered with smooth epoxy-resin and a coating of polyurethane for strength, and durability. The mounting ferrule is nickel-plated brass with standard 3/8x24 threads.

Frequency coverage is broadbanded but the top spike is adjustable which allows tuning for the lowest possible VSWR on 75M and the upper end of 10M.

Tap points are clearly engraved for each band. Changing bands is accomplished manually by plugging the unique OUTBACKER "Wander lead" into the proper tap; for 75M the lead is removed entirely.

Beautiful, shiny black finish. 8 models, with optional spring/base, mounts and cable.

| | Description | AES Model # | Price |
|---|---|---|---|
| OUTBACKER PERTH | 75-10M + WARCs, 150W P.E.P • 7.5 ft. tall • 3.5 ft. stinger retracts into 4 ft. mast for garaging | Perth | $289.95 |
| OUTBACKER PERTH PLUS | 75-10M ***plus*** 6 & 2M • 6 ft. tall • Perfect for HF+VHF radios: IC-706, DJ-70T, etc. | Perth Plus | $299.95 |
| OUTBACKER 8 | 75-10M, 300W P.E.P • 6 ft. tall | OB-8 | $279.95 |
| OUTBACKER HP | 75-10M • High-power – 500W P.E.P. • 6 ft. tall | OB-8HP | $299.95 |
| OUTBACKER SPLIT | 75-10M, 300 W P.E.P • 6 ft. tall • Breaks down into 2-3 ft. sections for easy transport, pouch included. | OB-S8 | $299.95 |
| OUTBACKER TRI-SPLIT | Same as OUTBACKER SPLIT except breaks down into 3-2 ft. sections, storage pouch included | OB-8TRI | $329.95 |
| OUTBACKER MARINER | Covers ITU Marine: 2.182, 4.1, 6.2, 8.2, 12.4, 16.5, & 22.1MHz and Ham bands: 75, 40, 20,17 &10M | OB-M | $429.95 |
| OUTBACKER STEALTH PLUS | 75-10M ***plus*** 6 & 2M • Only 4 ft tall, 150WP.E.P.• Perfect for use with HF+VHF radios: IC-706, DX-70T, etc. | Stealth-PLUS | $269.95 |
| OUTBACKER Spring/Base | HEAVY DUTY • Nickel/zinc plated • 3/8-24 threads • SO-239 connector • Requires 1/2" hole for mounting | OB-SB | $99.95 |
| OUTBACKER OB-360 | Trunk lip mount with spring for Perth/STPlus/Perth Plus | OB-360 | $99.95 |
| DIAMOND K-400/3/8C | Diamond 3/8x24 thread trunk-lip mount with 6 ft. coaxial cable for all OUTBACKER models | DIAK400-3/C | $69.95 |
| DIAMOND C-110 | Diamond 10 ft. extension cable for K-400/3/8C trunk-lip mount | DIAC-110 | $14.95 |

# The Alpha Delta Outpost™

## Tripod/Ground Coupler Ground Mount System

- Designed to match the base impedance of all **OUTBACKER®** antennas.
- Fold-over 3/8" x 24 – SO-239 top mount so the antenna will be out of view when not in use.
- Constructed of aircraft 6061-T6 aluminum, stainless steel hardware and wing nuts – No tools required!
- No digging – no holds in ground – no concrete required.
- The fold-out legs act as a large capacitor providing proper coupling to the ground and proper base impedance to the antenna.
- Fold-up design for 10 minute installation.
- Weight – 18 lbs.

- **OUTBACKER® OUTREACH™ Antenna ..... $399.95**
- **Alpha Delta OUTPOST™ Tripod ..... $199.95**

# Defining a NEW era of Efficient, Portable Antenna Systems

## Imagine This!

An *efficient* Portable antenna system – nearly unseen by your neighbors and covering ALL the bands from 160 thru 10 meters, providing an exceptional level of performance that will change forever the way you think about compact antennas.

## How Can This Be?

Alpha Delta & OUTBACKER® have teamed up to design a complete system to meet the needs of those requiring space limited, deed restricted, backyard, patio, woods or field day installations.

## The Outbacker® Outreach™ Antenna

- All Bands – 160 thru 10 meters –
- Only 12 feet tall!
- Exceptional performance – 10, 12, and 15 meters are 5/8 wave – all bands are center loaded for peak performance. Compare to any whip you have ever used – you'll be amazed!
- Handles 150 watts P.E.P.
- Split 8 ft. shaft and 4 ft. stinger – antenna breaks down to a 4 foot length for easy portability.
- Terminates in standard 3/8 x 24 base.
- Utilizes the time proven **OUTBACKER®** band tap system.
- Weight – 4lbs.

**$399.95**

Jim Burns, WB4ILP demonstrates the versatility of the **ALPHA DELTA OUTPOST™**

**ALPHA DELTA COMMUNICATIONS, INC.** AA

### Variable Response Console

An advanced audio processing speaker system that offers studio level audio quality for music, voice, and CW/data for the communications enthusiast. It enhances the reception capabilities of ANY receiver, transceiver or scanner—even the expensive ones using DSP! An exclusive custom designed ducted port bass reflex speaker system offers outstanding audio performance.

- **Low distortion, low harmonic push-pull audio amplifier. Outperforms the typical single-ended amplifier types.**
- **Adjustable 12dB Bass boost and cut circuitry enhances both Voice and Music. LED reads out in dB**
- **Adjustable sharp cut-off "Sampled Data Switched Capacitor Audio Filter" (SCAF) can be set for optimum interference reduction for any mode and any band condition – AM, FM, SSB, CW or data. LED light bar readout shows cut-off frequency and is calibrated in kHz.**
- **Peaking circuitry (20 dB) allows CW and Data signals to "pop" out of the background noise and interference.**
- **Continuously adjustable 40dB Deep Notch circuitry effectively takes out interfering heterodynes.**

**Model VRC** Variable Response Console ..... **$249.95**

**Model VRC-2** Ducted Port Bass Reflex Speaker same as above, but no amplifier/filter ... **$99.95**

## B&W Antennas & Accessories

### Multi-Band Antennas

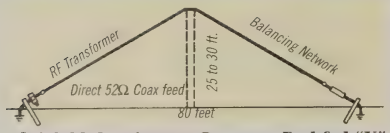
**AT-110 5-Band Trap Dipole** 80–10M, 52Ω coax feed, 110 ft. long, 2 KW PEP. Low VSWR on 80 & 40M; somewhat higher on 10, 15 & 20M – typically 2:1 to 3:1.Tuning adjustments. Assembled **$94.95**

**AT-55 4-Band Trap Dipole** 40–10M, 52Ω coax feed, 55 ft. long, 500W PEP. Assembled..... **$82.95**

**AC 3.5-30 Broadband Folded Dipole** Covers 1.8–30MHz continuous with a VSWR less than 2:1. 52Ω coax feed, 90 ft long, rated 2KW PEP. Install as a horizontal flattop, inverted-V, or sloper for DX. Assembled and tuned. ..... CLOSEOUT **$179.95**

**BWD 1.8-30** Same as AC 3.5-30, but covers 1.8-30MHz continuous. 2KW PEP, 90 ft. long . **$179.95**

**BWDS 1.8-30** above w/stainless steel wires...**$249.95**




**AC 1.8-30 Continuous Coverage End-fed "V"** Covers 1.8–30 MHz with VSWR less than 2:1, rated 2KW PEP. Requires 80 ft. of horizontal space, or when limited, can be shorted further with only a slight loss of efficiency ..... **$169.95**

### Antennas for Limited Space

**AS-160 160/80/40/20 meter Dipole or "V"** 137 feet. long, half-the-length of a full-sized 160 meter dipole, yet provides excellent performance. Also excellent full-size performance on 80, 40 & 20 meters. Three sets of traps isolate a 1/2-wave on each band. For best match and bandwidth, an antenna tuner is recommended for 160 with "no-tune-up" transceivers. 500W PEP.....**$154.95**

**AS-80 80/40/20 meter Dipole or Inverted "V"** Similar to the AS-160 above, except only two sets of traps. Where space is at a premium, this antenna can provide excellent coverage of 80 meters with a shortened overall length of only 78 ft. Low SWR on all three bands. 500 watts PEP ..... **$119.95**

**AS-40 40/20/15/10m Dipole or Inverted "V"** 2 sets of traps, 500W PEP, length is 40 ft... **$154.95**

**AS-20 20/15/10m Dipole or Inverted "V"** 2 sets of traps, 500W PEP, length is 23 ft..... **$119.95**

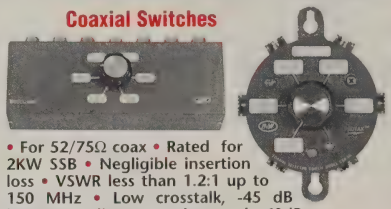
### Antennas for Very Limited Space

**AXS-160 160/30 meter Dipole or Inverted "V"** One set of traps, 500W PEP, length is 96 ft... **$94.95**

**AXS-80 80/40/15meter Dipole or Inverted "V"** Two sets of traps, 500W PEP, length is 72 ft.**$119.95**

**AP-10 Portable antenna** 57" fully extended. Convenient for limited space–apartments, travel, etc. Simply change coils for 2, 6, 10, 15, 18, 20, 30, or 40M. 300W PEP. Includes mounting bracket, coils, 10 ft. of coaxial cable & counterpoise wire .... **$69.95**

### Coaxial Switches



• For 52/75Ω coax • Rated for 2KW SSB • Negligible insertion loss • VSWR less than 1.2:1 up to 150 MHz • Low crosstalk, -45 dB between adjacent outlets and -60dB between alternate outlets at 30 MHz

**CSR-5G** (right) 5-position, side SO-239 connectors, wall mount. Grounding position for static & lightning protection ..... **$49.95**

**CS-6G** 6-position, locates on operating desk or mounts to wall. SO-239 connectors, grounding position for static & lightning protection.....**$49.95**

### Low Pass Filter

**FL-10/1500** Prevents radiation of TVI causing harmonics from transmitters operating in the 1.5 to 30 MHz range. Low VSWR 52Ω input & output. Rated for 1000W. Sharp cutoff, high attenuation of undesired harmonics with less than 0.3 db loss.....**$75.95**

### TECH TIP

**Save your Equipment**
**Save your Shack • Save your Life!**
Always include lightning protection in your antenna system. Effective protectors are available from **Alpha Delta, Cushcraft & Polyphaser – see the Index.**

## Van Gorden Engineering

**Hi-Q Balun**
- 1:1 or 4:1 impedance ratio: For matching 52Ω unbalanced coaxial cable to 52Ω balanced antennas.
- For dipoles, yagis, inverted vees and doublets.
- Covers 3 to 40MHz, 1.5kW
- Replaces center insulator
- Reduces feedline radiation for more power into antenna, and less TVI and BCI problems.
- Built-in DC ground reduces noise and protects against lightning.
- Weatherproof. SO-239 connector and center support eye hook.

**$14.95**

**Hi-Q Antenna Center Insulator**
- Insulator only, no internal balun
- Replaces egg-type center insulator
- Small, rugged, lightweight, weatherproof. SO-239 connector, center supporting eye hook.

**$6.95**

**Antenna End** End insulators ..... each **$3.95**
**Dog Bone** Antenna insulators ..... each **95¢**

**Dipole Antennas** Complete with Hi-Q 1:1 balun, #14 stranded copper antenna wire, plastic insulators, and 100 ft. of nylon rope. Rated for full legal power. May be used in an inverted V configuration.

**D-80** 80/75m, 130 ft. **D-15** 15m, 22 ft long
**D-40** 40/15m, 66 ft long **D-10** 10m, 16 ft long
**D-20** 20m, 33 ft. long **See the Price List**

**Shortened Dipoles** Construction is the same, and includes traps as shown above.....**See the Price List**
**SD-80** 75/80m, 90 ft. • **SD-40** 40m, 45 ft.

**All-Bander Dipole Antenna** Covers 160-10M using an antenna tuner with balanced output. Full 135 ft. long (or less, as an inverted V or sloper). Trim to fit small lots. Assembled, with #14 gauge copper wire, center and end insulators and 100 ft. of 450Ω balanced line. 2KW PEP ..... **$29.95**

**SHORTY All-Bander** As above, but with loading coils to shorten the length to 70 ft. overall . **$44.95**

**G5RV Multiband Antenna**

Covers 3.5–30MHz, and 1.8 MHz as a Marconi-type antenna with a tuner and good ground. Consists of a 102 ft. flat top with a 31 ft. section of 300Ω KW twinlead, a transformer/coupler & 70 ft. of RG-8X mini coaxial cable and connector. 2KW PEP, assembled.... **$50.95**

**G5RV Jr** 10–30MHz 17 ft. twinlead.....**$24.95**
**G5RV E** 3.5–30MHz, 102 ft., 31 ft. twinlead.**$28.95**
**G5RV M** 1.8–30MHz, 204ft., 65 ft. twinlead.**$49.95**

**VanGorden Ladder Line**
100 ft., 18 ga. 450 Ω insulated ladder line ... **$12.95**
100 ft., 14 ga. 450 Ω insulated ladder line ... **$24.95**
1000 ft 18 ga. 450 Ω insulated ladder line .. **$99.95**
1000 ft 14a. 450 Ω insulated ladder line ... **$199.95**

**VanGorden Nylon Rope**
NR-100 100 ft. roll, antenna guy rope ..... **$4.95**
NR-1000 1000 ft roll, antenna guy rope .....**$39.95**

**Special Connector**
Type-N male connector for Belden 9913 coax **$4.95**

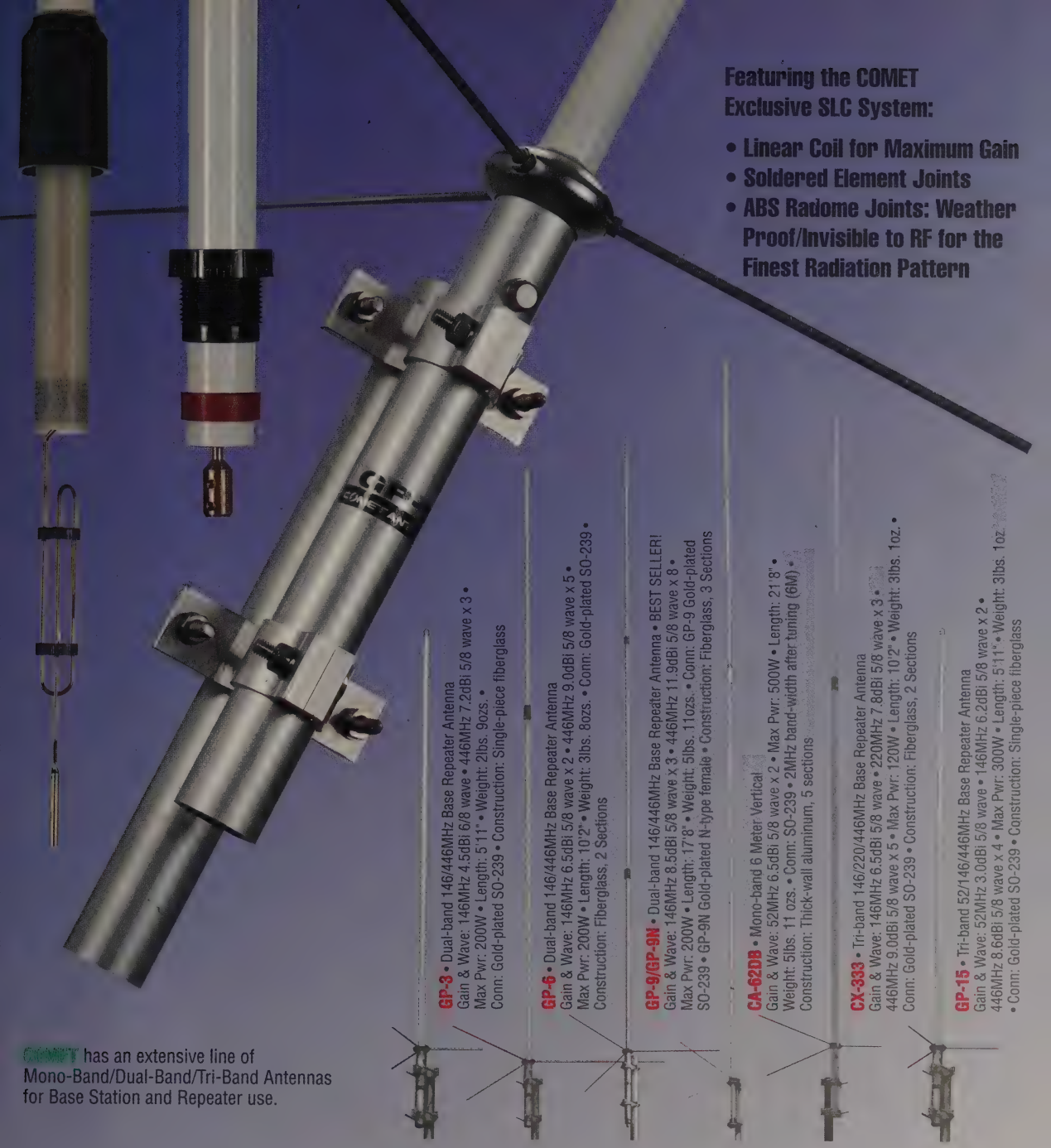
**VanGorden Ready-Made Coax Assemblies**
6–100 ft. lengths of RG-8X or RG-213 with Silver-Plated–Teflon PL-259 connectors ..... **See Price List**

*High Quality*
***Bencher***
*Keys/Keyers*
*See Index*

**ZA-1A 1:1 HF Balun** Improves performance of 80–10 meter dipoles, vees, quads and yagis. transforms 52Ω unbalanced coaxial line to a 52Ω balanced. Reduces feedline radiation, increases efficiency and reduces the possibility of TVI & BCI. Designed without a ferrite core so it can accept a substantial mismatch at full legal power, allowing use of an antenna tuner for broader frequency coverage. DC grounded for lightning protection. **$39.95**

**HWK Hardware kit** for 2" boom mounting ..**$9.95**

**YA-1 Low Pass Filter** Install at the output of 1.8 to 29.7MHz transmitters to reduce the possibility of TVI caused by unwanted harmonics. Minimum attenuation of 80db or better for harmonics in TV channel 2 and higher. Rated 1.5kW continuous, 5KW peak. 2½"w x 9⅛"l x 2½"h, 2 lbs ..... **$64.95**




For a complete catalog of **COMET** Antenna products call or visit your local dealer. Or, contact **NCG Company** at 800/962-2611. Use **COMET** products, and enjoy amateur radio to it's fullest!

COMET

1275 N. Grove Street • Anaheim • California 92806
(714) 630-4541 • (800) 962-2611 • Fax: (714) 630-7024

**CH-32**
Miracle Baby
146/446MHz
HT Antenna
Gain: 0dBi
Length: 1.75"
Conn: BNC

- **Gold-Plated Connectors**
- **High-Quality Craftsmanship**
- **Unique Fold-Over Feature**













**NEW Z750** • Dual-band 146/446MHz w/fold-over • Includes COMET exclusive theft-resistant lock!
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 446MHz 5.5dBi 5/8 wave x 2 • Length: 39" • Conn: Gold-plated PL-259 • Max Pwr: 200W

**NEW Z780** • Dual-band 146/446MHz w/fold-over • Includes COMET exclusive theft-resistant lock!
146MHz 6/8 wave 4.5dBi • 446MHz 5/8 wave x 3 7.2dBi • Length: 62" • Conn: Gold-plated PL-259 • Max Pwr: 150W

**NEW SBB-15** • Tri-band 52/146/446MHz w/fold-over **NEW BLACK COLOR**
Gain & Wave: 52MHz 0dBi 1/4 wave • 146MHz 4.5 dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Length: 58" • Conn: PL-259 • Max Pwr: 120W

**NEW SBB-7/SBB-7NMO** • Dual-band 146/446MHz w/fold-over **NEW BLACK COLOR**
Gain & Wave: 146MHz 4.5dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Length: 58" • Conn: SBB-7 PL-259/SBB-7NMO NMO • Max Pwr: 70W

**NEW SBB-5/SBB-5NMO** • Dual-band 146/446MHz w/fold-over **NEW BLACK COLOR**
Gain & Wave: 146MHz 2.5dBi1/2 wave • 446MHz 5.5dBi 5/8 wave x 3 • Length: 39" • Conn: SBB-5 PL-259/SBB-5NMO NMO • Max Pwr: 120W

**CX-224/CX-224NMO** • Tri-band 146/220/446MHz w/fold-over
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 220MHz 3.5dBi 5/8 wave • 446MHz 6.0dBi 5/8 wave x 2 • Length: 36" • Conn: CX-224 PL-259, CX-224NMO NMO • Max Pwr: 100W

**B-20/B-20NMO** • Dual-band 146/446MHz w/fold-over
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 446MHz 5.0dBi 5/8 wave x 2 • Length: 30" • Conn: B-20 PL-259/B-20NMO NMO • Max Pwr: 50W

**SH-55** • Super Flexible 146/446MHz HT Antenna
Gain: 146MHz 1.5dBi • 446MHz 3.2dBi • Length: 15.5" • Conn: BNC • Max Pwr: 10W

**B-10/B-10NMO** • Dual-band 146/446MHz cellular look-a-like • Gain & Wave: 146MHz 0dBi 1/4 wave • 446MHz 2.15dBi 1/2 wave • Length: 12" • Conn: B-10 PL-259/B-10NMO NMO • Max Pwr: 50W

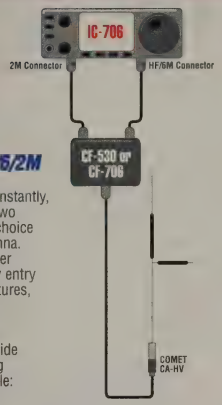
**COMET** Specializes in a wide assortment of Mobile Mounting Systems that require NO HOLES. A variety of trunk lid, hatchback, rain gutter, roof rack and window mounts are available along with low loss coax cable assemblies, for the ultimate mobile station!

For a complete catalog of **COMET** Antenna products call or visit your local dealer. Or, contact **NCG Company** at 800/962-2611. Use **COMET** products, and enjoy amateur radio to it's fullest!




**1275 N. Grove Street • Anaheim • California 92806**
**(714) 630-4541 • (800) 962-2611 • Fax: (714) 630-7024**

# COMET Antennas Specifically Designed For Use With The IC-706 From ICOM And The DX-70 From Alinco




## CA-HV

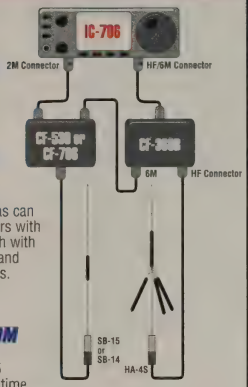
***40/*20/15/10/6/2M***

Operate 2M/6M constantly, and either one or two HF bands of your choice from a single antenna. Convenient fold-over feature allows easy entry into parking structures, drive-thrus, etc.

Each HF coil tunes independently. A wide variety of mounting options are available:

- Hole Mount
- Trunk Lip Mount
- Hatchback Mount
- Rain Gutter Mount
- Pipe Clamp Mount

**** L-14: Optional 14MHz Coil***




## SB-15

***6M/2M/440MHz***
***61" Tall***

## SB-14

***6M/2M/440MHz***
***42" Tall***

These triband antennas can be used as dualbanders with the ICOM IC-706. Both with fold-over capabilities and easy mounting options.

## HA-4S

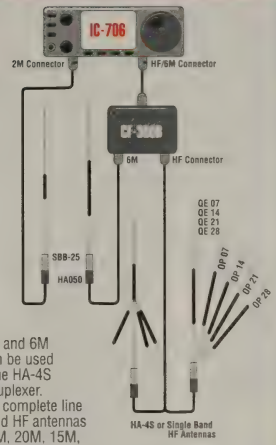
***40/*20/15/12/10M***

Operate any 4 of the 5 available HF coils at a time. Each coil tunes independently, convenient fold-over feature allows easy entry in parking structures, drive-thrus, etc.

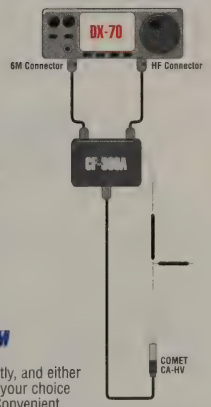
Tune from band to band without the need to change coils, plugs, whips, etc.

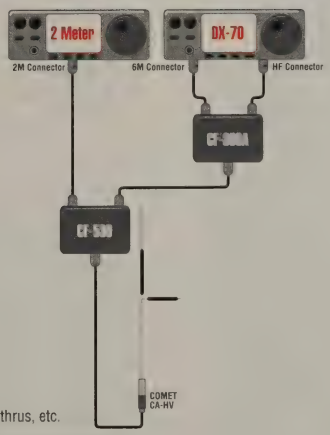
A wide variety of mounting options are available.

**** L-14HS: Optional 14MHz Coil***




Separate 2M and 6M antennas can be used along with the HA-4S avoiding a duplexer. Comet has a complete line of single band HF antennas for 80M, 40M, 20M, 15M, and 10M. All approximately 40" to 45" in height. QE antennas use optional whips.




## CA-HV

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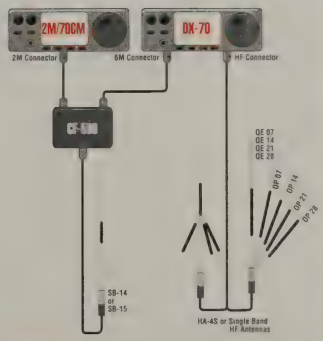
Each HF coil tunes independently. A wide variety of mounting options are available:

- Hole Mount
- Hatchback Mount
- Pipe Clamp Mount
- Trunk Lip Mount
- Rain Gutter Mount

**** L-14: Optional 14MHz Coil***




## SB-15

***6M/2M/440MHz***
***61" Tall***

## SB-14

***6M/2M/440MHz***
***42" Tall***

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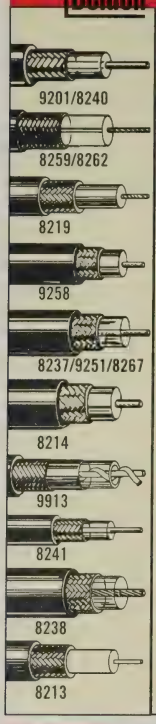
**COMET**

**Customer Service: (800) 962-2611**

## Belden Coaxial Cable — *See Price List under Belden*




| Belden number | RG-type | Dia. (in.) | Center conductor | Insulation type | Shield coverage | Jacket type | Imp. (Ω) | Vel. factor | Loss/100' 100 MHz |
|---|---|---|---|---|---|---|---|---|---|
| 9201 | 58/U | .193 | #20 solid copper | Solid polyethylene | 78% bare copper | PVC | 53 | 66% | 4.5 dB |
| 8240 | 58/U | .193 | #20 solid tinned cop. | Solid polyethylene | 95% tinned copper | PVC | 53.5 | 66% | 3.8 dB |
| 8259 | 58A/U | .193 | #20 stranded tinned cop. | Solid polyethylene | 96% tinned copper | PVC | 50 | 66% | 4.9 dB |
| 8219 | 58C/U | .193 | #20 stranded tinned cop. | Cellular polyethylene | 96% tinned copper | PVC | 50 | 78% | 4.5 dB |
| 8262 | 58/CU | .193 | #20 stranded tinned cop. | Solid polyethylene | 95% tinned copper | Non-contam. PVC | 50 | 66% | 4.9 dB |
| 9258 | 8/X | .242 | #16 stranded copper | Cellular polyethylene | 95% bare copper | PVC | 50 | 78% | 3.7 dB |
| 8237 | 8/U | .405 | #13 stranded copper | Solid polyethylene | 97% bare copper | PVC | 52 | 66% | 1.9dB |
| 8214 | 8/U | .405 | #11 stranded copper | Cellular polyethylene | 97% bare copper | PVC | 50 | 78% | 1.8 dB |
| 9913 | 8/U | .405 | #10 solid copper | Semi-solid polyethylene | 100% foil + 88% braid | PVC | 50 | 84% | 1.3 dB |
| 9913F | 8/U | .405 | #10 stranded copper | Cellular polyethylene | 100% foil + 90% braid | PVC | 50 | 83% | 1.3 dB |
| 9251 | 8A/U | .405 | #13 stranded copper | Solid polyethylene | 97% bare copper | Non-contam. PVC | 52 | 66% | 2.2 dB |
| 8267 | 213/U | .405 | #13 stranded copper | Solid polyethylene | 97% bare copper | Non-contam. PVC | 50 | 66% | 2.1 dB |
| 8241 | 59/U | .240 | #22 solid copper | Solid polyethylene | 95% bare copper | PVC | 73 | 66% | 3.4 dB |
| 8238 | 11/U | .405 | #18 stranded tinned cop. | Solid polyethylene | 97% bare copper | PVC | 75 | 66% | 2.0 dB |
| 8213 | 11/U | .405 | #14 solid copper | Cellular polyethylene | 95% bare copper | PVC | 75 | 78% | 1.5 dB |

## Belden New 9913F High-Flex RF Transmission Cable

This low-loss RG-8/U-type coaxial cable is a high-flex version of Belden's popular 9913. It offers a stranded center conductor for improved flexibility and flex life, a patented high-flex cut and abrasion resistant jacket and a high velocity foam insulation.

- **Center Conductor:** 10 AWG (19x23) .108 bare copper
- **Insulation type:** Foam polyethylene
- **Shield:** Duobond II + 90% tinned copper braid; 100% shield coverage.
- **Nominal Impedance:** 50Ω • **Velocity Factor:** 83%
- **Diameter:** .405 inch • **Nominal Capacitance:** 24.5 pF/ft.
- **Loss per 100 ft:** 1.3B @100MHz, 2.8dB @400MHz

Per ft. **$.87** - 100 ft. roll **$79.95** - 250 ft. roll **$149.95**
500 ft. roll **$279.95**

## synthetic textiles, inc. BLACK DACRON® POLYESTER ANTENNA ROPE

- UV-PROTECTED • HIGH ABRASION RESISTANCE
- REQUIRES NO EXPENSIVE POTTING HEADS
- EZ TO CUT •100 ft. 3/32" **$6.95** – 350 ft. 3/16" **$39.95**

## penetrox®a Electrical Joint Compound

A special anti-seizing compound for all bare aluminum to aluminum and aluminum to copper connections, and also as a thread lubricant. Apply to mating pieces of antenna components, tubing, etc. before assembly to provide a non-corrosive, low resistance, airtight seal. Makes disassembly of tubing and bolts at later date a breeze . 4 oz .....**$12.95**

## TECH TIP

When using Silicon adhesive to seal a connector or anything else in an electronic environment, make sure it is the *"non-acid containing silicone."* If it smells like vinegar, don't use it!

## COAX-SEAL® Hand Moldable Plastic for Antenna Component Protection

Coax Seal quickly and effectively seals all types of coaxial fittings; baluns; antenna parts and connectors of all shapes – adheres tightly to vinyl and poly vinyl coax outer jackets. Simply wrap it on like you would regular tape, then mold it to any shape. It stays flexible and sealed at any temperature for years to resist moisture penetration and deterioration. Its permanent flexibility makes it possible to remove and re-install fittings, then re-seal by simply reforming the same material. Non-toxic, non-contaminating. Roll, 1/2" wide x 60" .....UNV 104 **$2.95**

## STUF Dielectric Waterproofing Filler for Coaxial Connectors

**Waterproofs from the inside–out!**

- High purity macroscopic foam, dielectrically simulates the coaxial cable core. No Insertion Loss!
- Contains no silicones, etc. to harm coaxial cable material.
- Just fill connector and tighten–hydraulically channels filler into all connector voids and ports of moisture infiltration.
- Non-hardening, easy removal.

CRS STUF **$4.95** per tube

MasterCard VISA DISCOVER NOVUS Cards

## PolyPhaser® CORPORATION *Lightning Protection*

**PolyPhaser's Impulse Suppressors feature a hermetically sealed voltage sensitive gas tube. Additional components and unique design provide NO DC CONTINUITY with low loss to assure that surge voltages and currents that form differentially on the coaxial cable are prevented from being shared by your valuable equipment.**

### BROADBAND COAXIAL PROTECTORS

- Multi-strike capability with low strike throughput energy • Aluminum enclosure.
- VSWR: ≤1.1 over its frequency range

**FLANGE MOUNT (right)**

**IS-50UX-CO** Frequency Range: 1.5MHz to 400MHz. Maximum Power: HF 2kW, VHF 375W, UHF 125W ..... **$56.95**

**IS-50UX-C1** Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W ..... **$56.95**

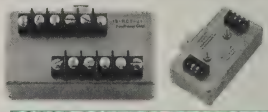
**IS-50NX-C2** Range: 125MHz to 1000MHz. Max.Power: VHF 375W, UHF (low) 125W, 800MHz -1 GHz 50W. Type N ... **$56.95**

**BULKHEAD MOUNT (left)**

**IS-B50LU-C0** Frequency Range: 1.5MHz to 400MHz. Maximum Power: HF 2kW, VHF 375W, UHF 125W .....**$59.95**

**IS-B50LU-C1** Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W ..... **$59.95**

**IS-B50LN-C2** Range: 125MHz - 1000MHz. Max. Power: VHF 375W, UHF (low) 125W, 800MHz-1 GHz 50W. Type N..... **$59.95**



### ROTOR CONTROL PROTECTOR

**IS-RCT** (left) Provides protection for rotor controllers, motors, control box and other nearby equipment. EMP rated–faster than other gas tubes with lower turn-on voltage. Water tight enclosure with mounting stud. 7¼"h x 3¼"w x 2½"d..... **$54.95**

### IN-LINE PHONE LINE PROTECTOR (right)

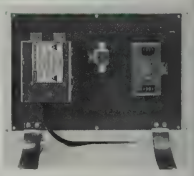
**IS-SPTL** Multi-stage protection, with large bandwidth and fast response time, EMP rated. For telephone trunk lines - handles standard ring voltages to 105Vrms. Handles surges up to 36kA ..... **$57.95**

### POWER LINE EXTENSION PROTECTOR

In-line, multi-stage EMP rated protectors provide multi-strike power line protection, filtering and proper grounding when equipment use requires an extension cord. Two outlets, master on/off switch, circuit breaker for added protection. All aluminum grounded enclosure, 4¾" wide.

**IS-PLDO-120-15A** 15' cord, 120V @ 15A. **$172.95**
**IS-PLDO-120-20A** 6' cord, 120V @ 20A...**$215.95**

### COPPER GROUNDING PANEL



**CU-SPGP** A .062" thick copper plate mounted on a painted 1/2" plywood backing. Used for mounting protectors and establish a single ground point for station equipment. Comes with concrete anchors, all mounting screws, 10 ft. of 1½" copper grounding strap, 2 brass sandwich plates and joint compound. 18"w x 12"h, 16" center mt. .**$63.95**

### LOW INDUCTANCE COPPER STRAP

Copper strap has an advantage over wire when used for grounds because it has lower inductance and cannot be fused open by lightning. For example: 1½" strap has a lower inductance than #2.0 stranded wire. It's easy to cut, solder, etc. Usable above or in-ground applications, #6 AWG thickness (0.159"). Available in 1½, 3 & 6 inch widths & 25, 50, 75 or 100 ft. rolls. **See Polyphaser in the Price List**

cushcraft CORPORATION

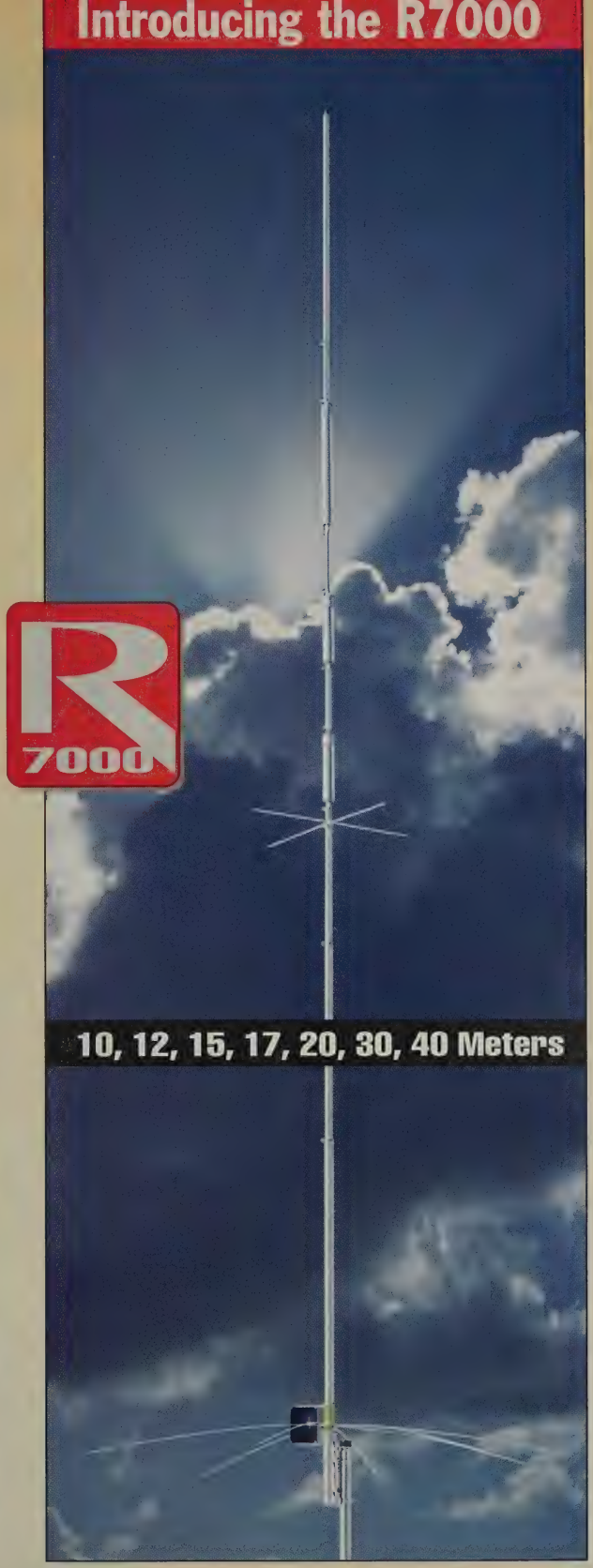
# Introducing the R7000

The all new R7000 is a 10 through 40 meter, no ground radial antenna that is expandable to include the excitement of 80 meters. It includes the best features of its predecessor the R7 plus many more. R7000 means excellent performance, easy installation and use, slim silhouette and high reliability.

## R80 Add-On Kit

80 meters can be easily added to the R7000 with the R80 kit. The kit includes a 40 meter trap, tubing, 80 meter loading coil, UV stable 400 lb. test guy rope and three 20 foot counterpoise wires that attach to your guy points. The R80 counterpoise wires were designed with state-of-the-art anti-resonators to ensure top performance on all bands. The R7000 with R80 kit is pictured to the far right.

- **EXPANDABLE TO 80M**
  Transform your R7000 into an R7000+ with R80 kit (trap, tubing, guy & counterpoise wire)
- **RELIABLE**
  New trap design is stable in all conditions
- **EASY INSTALLATION**
  For typical use, tuning is not needed
- **AUTOMATIC BAND CHANGING**
  To any band from 10 through 40m (80m with R80 kit)
- **SLIM SILHOUETTE**
  Gain favor of family and neighbors with the slim, smooth profile of our new trap design




| MODEL | R7000 | R7000+ (w/R80 kit) |
|---|---|---|
| Frequency, meters | 10,12,15,17, 20,30,40 | 10,12,15,17 20,30,40,80 |
| Gain, dBi | 3 | 3 |
| Wavelength each bd | Half-wave | Half-wave |
| VSWR | 1.2:1 typical | 1.2:1 typical |
| 2:1 bandwidth, KHz | 10m (1700)<br>12m (100)<br>15m (450)<br>17m (100)<br>20m (250)<br>30m (100)<br>40m (150) | 10m (1700)<br>12m (100)<br>15m (450)<br>17m (100)<br>20m (250)<br>30m (100)<br>40m (100)<br>80m (70) |
| Power Rating, Watts | 1500 | 1500 |
| Radiation angle, deg. | 16 | 16 |
| Horizontal rad, deg | 360 | 360 |
| Height, ft(m) | 24 (7.3) | 34.5 (10.5) |
| Mast size range, in (cm) | 1-3/4 to 2-1/8 (4.4-5.4) | 1-3/4 to 2-1/8 (4.4-5.4) |
| Wind load, $ft^2$ ($m^2$) | 2 (0.2) | 2.5 (.23) antenna<br>1.5 (.139) guys |
| Weight, lb, (kg) | 18 (8.2) | 24 (10.8) |

# R7000+ (with 80m Kit)

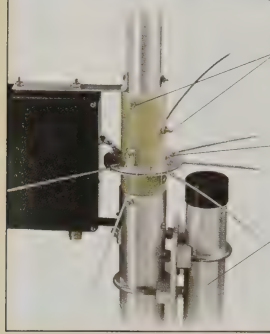
**Here's what some of the very first R7000 users have to say.**

*"The antenna is well built. The instructions are very clear with very helpful diagrams . . . Seven bands right out of the box with no tuning is impressive. . . I really like the construction of this antenna, no loose lockwashers to chase around. All stainless steel hardware is top notch. Keep up the good work."* WVØH

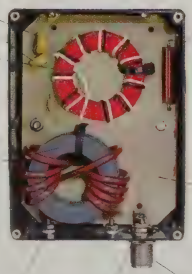
*"The R7000 experienced several hours of 50 mph sustained wind with gusts 70 plus mph. I used the R7000 during this time and noticed no difference in performance . . . I was surprised by being able to easily work western European and western African stations on 17m (from North Dakota) "* WBØOAJ

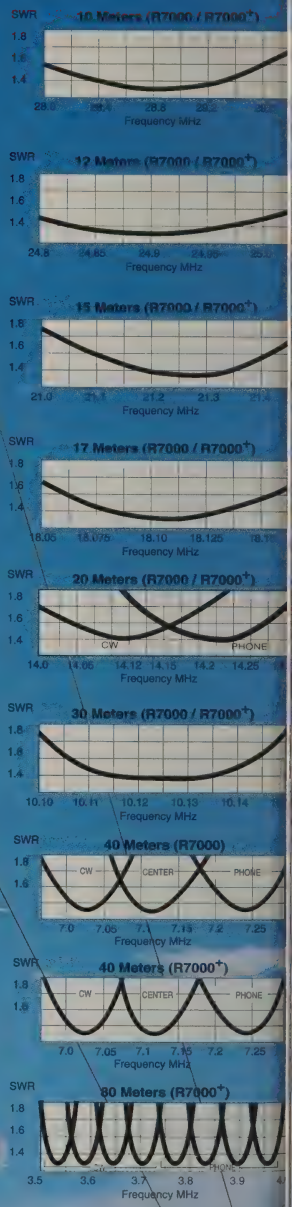
## R7000 Trap

## R7000's Rugged Design




## R7000 Matching Network




**10, 12, 15, 17, 20, 30, 40, 80 Meters**

cushcraft CORPORATION



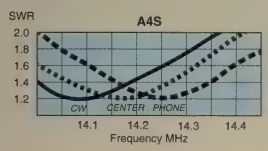
Cushcraft Corporation, Manchester, NH

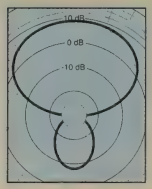
# 10, 15, 20, 40 Meters

## Cushcraft Tribanders Make More DX Fun!

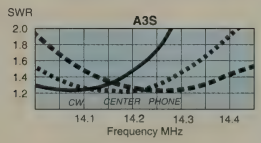
*Our three and four element tribanders provide the versatility and performance that you need for reliable communication around the world. And they last! Cushcraft's World Rangers are made with 6063-T832 aluminum tubing, weatherproof traps, and fiberglass insulators to stand up to the weather. Our World Rangers have 50 Ohm twin terminal connectors and need no balun. They are designed with fewer parts for easier assembly, lower weight and less windload. You will spend your time in the shack, not on the tower!*

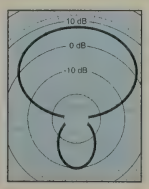
*Ham radio is a lot more fun when you have a dependable antenna like our World Ranger. Make your choice from our A4S , A3S and A3WS models. Add a 30 or 40 meter kit to make your antenna even more versatile!*




A4S RADIATION PATTERN




A3S RADIATION PATTERN

## A4S Four Element Beam

***With stainless steel hardware.***

The A4S is the true, high performance tribander. Precisely tuned high-power traps, carefully selected element lengths, and proper spacing combine to make the A4S the preferred antenna for your contest work! This is the premium antenna with all the features that you want. High gain, low SWR, and wide bandwidth keep the contacts coming in. All U-bolts, clamps and hardware are stainless steel. The A4S has pinned boom sections and formed aluminum brackets to keep elements straight under all conditions. And our solid construction keeps the A4S on the tower!

## A3S Three Element Beam

***With stainless steel hardware.***

The A3 World Ranger, our top selling tribander, has become the A3S with all stainless steel hardware. It's a real power-house in a small space and lets you work the pile-ups with confidence. All you need is a lightweight tower and rotator to enjoy the benefits of the A3S. It's a proven performer in DX-peditions and contests and handles full power from your linear. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware.

When space is at a premium, but you want the benefits of a full-size tribander, the A3S is right for you!

| MODEL | A4S | A3S |
|---|---|---|
| Frequency, MHz | 28, 21, 14 | 28, 21, 14 |
| No. Elements | 4 | 3 |
| Forward Gain, dBd | 8.9 | 8 |
| Front to Back Ratio, dB | 25 | 25 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth KHz | >500 | >500 |
| Power Rating, Watts PEP | 2000 | 2000 |
| 3 dB Beam Width, Deg. E Plane | 58 | 60 |
| Boom Length, ft (m) | 18 (5.48) | 14 (4.27) |
| Boom Diameter, In (cm) | 2 (5.10) | 1.5 (3.81 |
| Longest Element, ft (m) | 32 (9.75) | 27.75 (8.45) |
| Element Center Dia, in (cm) | 1.25 (3.18) | 1.25 (3.18) |
| Turning Radius, ft (m) | 18.4 (5.49) | 15.5 (4.72) |
| Mast Size Range, in (cm) | 1.25-2.00 (3.18-5.08) | 1.25-2 (3.18-5.08) |
| Wind Load, $ft^2$ ($m^2$) | 5.50 (0.51) | 4.36 (0.47) |
| Weight, lb (kg) | 37 (16.8) | 27 (12.9) |

## 30 and 40 Meter Add-On Kits

40 meters will come alive by adding one of these kits to the dipole of your A3S or A4S. The kits include high power traps with heavy wall fiberglass insulator and all hardware. A simple adjustment allows 30 meter operation. For our newest beam, the A3WS, we have a 30 meter add on kit the A103.

**A743** 7 MHz/10 MHz kit for A3S
**A744** 7 MHz/10 MHz kit for A4S
**A103** 10 MHz kit for A3WS

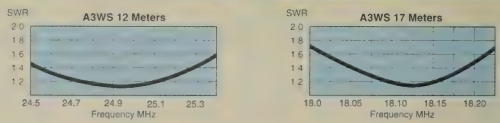
| MODEL | A743/A744 | | A103 |
|---|---|---|---|
| BAND | 7 MHz (40 m) | 10 MHz (30 m) | 10 MHz (30 m) |
| Driven Element with Adapter kit, ft (m) | 33.19 min.<br>35.33 max.<br>(10.12-10.77) | 27.12 min.<br>28.4 max.<br>(8.27-8.66) | 32.1<br><br>(9.8) |
| Windloading ft2 (m2) | .58 (.05) | .27 (.03) | .45 (.04) |
| Bandwidth, KHz | 125 | 150 | 250 |
| Power Rating, Watts | 2000 PEP | 2000 PEP | 2000 PEP |
| Side Rejection, dB | 20 | 20 | 20 |
| Weight, lb (kg) | 3.44 (1.56) | 2.29 (1.04) | 3.25 (1.47) |

# 10, 15, 20, 40 Meters

## A4S at VP8SGP
South Georgia Island Dxpedition

Head south from the US and take the last exit before Antarctica and you will be on South Georgia Island. The VP8SGP group activated this rare island and logged over 18,000 QSO's. A favorite antenna of Dxpeditions, this A4S performed flawlessly in these extreme conditions. Try one at your QTH.

| MODEL | A3WS |
|---|---|
| Frequency, MHz | 24, 18 |
| No. Elements | 3 |
| Forward Gain, dBd | 8.0 |
| Front to Back Ratio, dB | 25 |
| SWR 1.2:1 Typical | |
| 2:1 Bandwidth | 300 KHz |
| Power Rating, Watts | 2000 PEP |
| 3 dB Beam Width, Deg. E Plane | 60 |
| Boom Length, ft (m) | 14 (4.27) |
| Boom Diameter, In (cm) | 1.50 (3.81) |
| Longest Element, ft (m) | 25.1 (7.66) |
| Element Center Dia, in (cm) | 1.25 (3.18) |
| Turning Radius, ft (m) | 14.4 (4.4) |
| Mast Size Range, in (cm) | 1.25-2 (3.18-5.08) |
| Wind Load, $ft^2$ ($m^2$) | 4.1 (.38) |
| Weight, lb (kg) | 22.5 (10.2) |







## A3WS WARC Bands 3 Element Beam

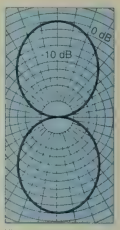
Enjoy the excitement of our newest HF bands with this all new beam. The A3WS gives full performance on 12 and 17 meters. With the addition of our easy-to-use A103 add on kit, it will also cover 30 meters. A3WS needs only a lightweight tower and rotator or you can mount it above an existing tribander. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware. Take charge of 12, 17 and 30 meters with the new A3WS.

## Rotatable Dipoles

Our World Ranger Dipoles give bi-directional patterns and rotatable convenience. You can mount them high and away from the trees for better performance than a wire dipole. These single and multi-band dipoles feature high-performance traps, heavy wall tubing, and rugged hardware for years of enjoyment.

## D3W World Ranger Dipole

The perfect answer for the WARC bands. This rotatable dipole is easily mounted on the same mast as your existing tri-bander or other antennas. With a bi-directional pattern it will give you amazing performance on the new bands.




Typical Dipole Radiation Pattern

| MODEL | D40 | D4 | D3 | D3W |
|---|---|---|---|---|
| Frequency, MHz | 7 | 28,21,14,7 | 28,21,14 | 24,18,10 |
| SWR 1.2:1 Typical | | | | |
| 2:1 Bandwidth, KHz | 200 | >350<br>40>125 | >500 | >200 |
| Power Rating | | | | |
| Watts PEP | 2000 | 2000 | 2000 | 2000 |
| Length ft | 42.25 | 35.8 | 25.8 | 34.0 |
| (m) | (12.88) | (10.92) | (7.86) | (10.37) |
| Mast Size. in(cm) | 1.5-2 (3.8-5) | 1.5-2 (3.8-5) | 1.5-2 (3.8-5) | 1.5-2 (3.8-5) |
| Wind Load, ft2 (m2) | 1.3 (.12) | 1.3 (.12) | .9 (.08) | .9 (.08) |
| Weight, lb (kg) | 12 (5) | 13 (6) | 9 (4) | 11 (5) |

# 10 Through 20 Meters

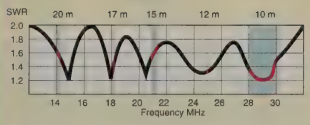
## Skylog

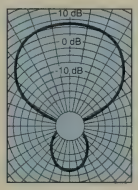
- **Continuous five band coverage from 13.5 to 32 MHz**
- **Constant gain over entire frequency range**
- **6.4 dB gain, 65 degree beamwidth**
- **High efficiency design, antenna stays cool and VSWR steady**
- **18 foot boom and 19.5 foot turning radius**

This all new log periodic antenna is the most cost effective, high gain, five band antenna solution on the market today. Skylog offers continuous operation from 13.5 to 32 MHz. Antenna gain and beamwidth are constant for uniform coverage from 10 through 20 meters. The ASL2010 is rated for continuous duty at full legal power. Skylog is designed for maximum gain on a manageable 18 foot boom with only 10.1 square feet of wind surface area. All stainless steel hardware and rugged element design are only some of the many features that provide years of superior antenna performance. Skylog ASL2010 is the smart choice for multiband HF operation.

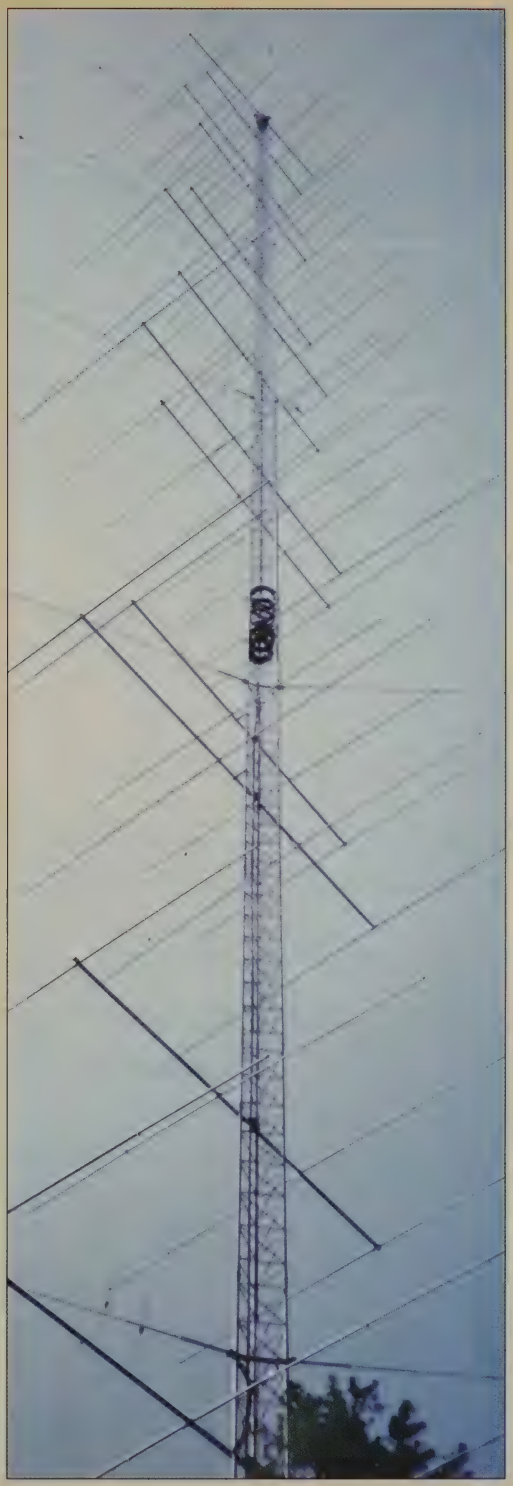
| MODEL | ASL2010 |
|---|---|
| Frequency, MHz | 13.5-32 |
| No. Elements | 8 |
| Forward Gain, dBd | 6.4 |
| Front to Back Ratio, dB | 15-20 |
| SWR 1.2:1 Typical | |
| 2:1 Bandwidth | 18.5 MHz |
| Power Rating, Watts | 2000 |
| 3 dB Beam Width, Deg. E Plane | 65 |
| Boom Length, ft (m) | 18 (5.48) |
| Boom Diameter, In (cm) | 2.0 (5.08) |
| Longest Element, ft (m) | 38 (11.58) |
| Element Center Dia, in (cm) | 1.25 (3.18) |
| Turning Radius, ft (m) | 19.25 (5.86) |
| Mast Size Range, in | 1.5-2 |
| (cm) | (3.18-5.08) |
| Wind Load, $ft^2$ ($m^2$) | 10.1 (.93) |
| Weight, lb (kg) | 55 (25.5) |

ASL2010




ASL2010



Cushcraft Yagis **"stacked to the sky"** on one of the 200 foot towers at KC1XX. This tower has 56 total elements aimed at Europe for contest winning performance. On 15 meters, there are six Cushcraft 154CD Yagis for 4 over 4 over 4 over 4 over 4 over 4, (4/4/4/4/4/4). On 10 meters, eight 104CD Yagis are stacked for 4/4/4/4/4/4/4/4. KC1XX has never been known to "lose" a frequency.

# 10, 15 Meters

## 10 Meters

The three element model is a great selling antenna! If you have the space, and need the utmost in performance, then try our four element Skywalker. You can't go wrong with these contest winners, especially if you are a Novice new to ten meters!

| MODEL | 10-4CD | 10-3CD |
|---|---|---|
| Frequency, MHz | 28.0-29.7 | 28.0-29.7 |
| No. Elements | 4 | 3 |
| Forward Gain, dBd | 10.0 | 8.0 |
| Front to Back Ratio, dB | 30 | 30 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth, KHz | >900 | >1400 |
| Power Rating, Watts PEP | 2000 | 2000 |
| 3 dB Beamwidth, Deg. E Plane | 56 | 57 |
| Side Lobe Attenuation, dB | 40 | 40 |
| Boom Length, ft (m) | 16 (4.88) | 10 (3.05) |
| Boom Diameter, In (cm) | 2.0 | 1.63-1.50 |
| | (5.08) | (4.1-3.8) |
| Longest Element, ft (m) | 17.58 (5.34) | 17.66 (5.38) |
| Element Center Dia, in (cm) | .88-.63 | .88-.63 |
| | (2.2-1.6) | (2.2-1.6) |
| Turning Radius, ft (m) | 11.5 (3.5) | 10 (3.05) |
| Mast Size Range, in (cm) | 1.5-2.0 | 1.5-2.0 |
| | (3.8-5.1) | (3.8-5.1) |
| Wind Load, $ft^2$ ($m^2$) | 3.1 (.29) | 2.3 (.21) |
| Weight, lb (kg) | 18 (8.16) | 11 (5.00) |

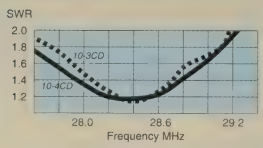
## More Performance Than You Ever Imagined

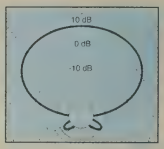
More contacts, less waiting, less interference, and a better signal at the other end are yours with a Skywalker!

Computer-aided design helped us maximize forward gain while reducing sidelobes and SWR. Our 50 Ohm Reddi-match feed uses a UHF SO-239 for easy connection.

Construction features include improved larger diameter pinned booms with fewer sections, heavy-wall heat treated 6063-T832 aluminum tubing, stainless steel fasteners, worm drive element clamps, and carefully formed aluminum brackets.

Assembly is easy and installation can often be done by one person!
Skywalkers are contest winners. One of these fine antennas is perfect for you.



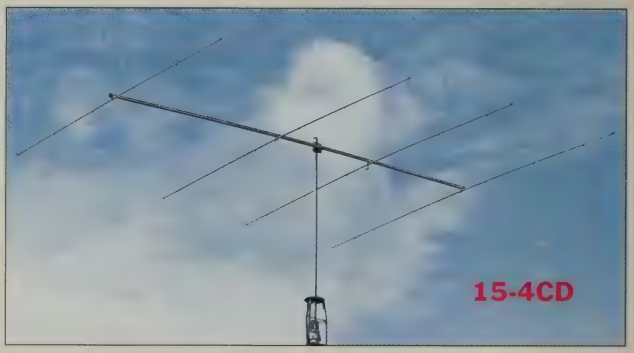

Typical 3 Element Pattern

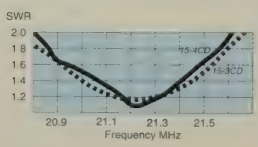
## 15 Meters

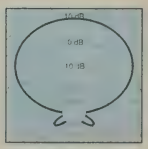
These two Skywalkers will keep you enthusiastic about 15 meters. Our three element model gives fine performance in limited areas. For maximum gain, select the four-element model with its new 2" diameter boom. Or, try stacking two four element Skywalkers for incredible performance! Reddi-match tuning makes it easy.

The 10dB forward gain of our 15-4CD is the result of computer design and will keep you the first in line during pileups!

| MODEL | 15-4CD | 15-3CD |
|---|---|---|
| Frequency, MHz | 21.0-21.45 | 21.0-21.45 |
| No. Elements | 4 | 3 |
| Forward Gain, dBd | 10.0 | 8.0 |
| Front to Back Ratio, dB | 30 | 30 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth, KHz | 500 | 500 |
| Power Rating, Watts PEP | 2000 | 2000 |
| 3 dB Beamwidth, Deg. E Plane | 56 | 57 |
| Side Lobe Attenuation, dB | >40 | >40 |
| Boom Length, ft (m) | 20 (6.10) | 14 (4.27) |
| Boom Diameter, In (cm) | 2.0 | 2.0 |
| | (5.08) | (5.08) |
| Longest Element, ft (m) | 23.33 (7.11) | 23.16(7.06) |
| Element Center Dia, in (cm) | 1 (2.5) | 1 (2.5) |
| Turning Radius, ft (m) | 15.4 (4.72) | 13.5 (4.11) |
| Mast Size Range, in (cm) | 1.5-2.0 | 1.5-2.0 |
| | (3.8-5.1) | (3.8-5.1) |
| Wind Load, $ft^2$ ($m^2$) | 4.5 (.42) | 3.4 (.32) |
| Weight, lb (kg) | 25 (11.34) | 20 (9.07) |

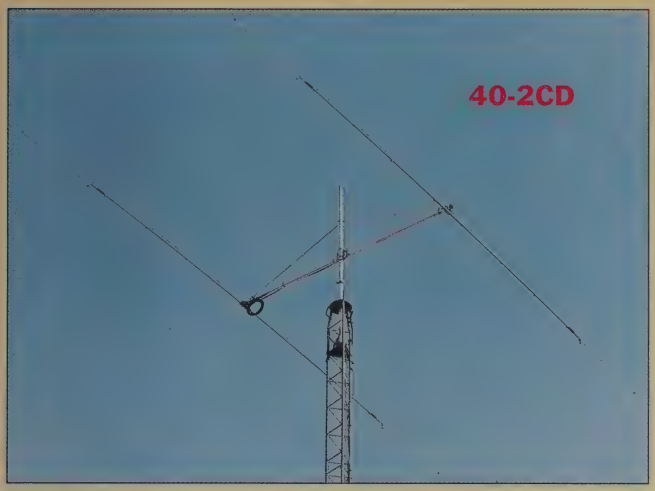


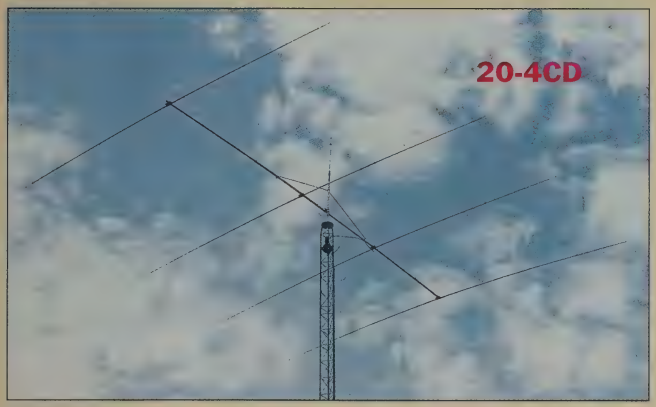



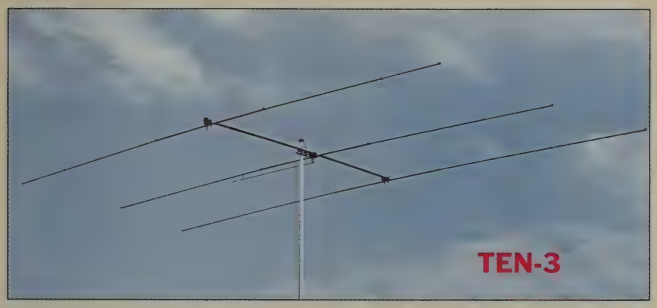




Typical 3 Element Pattern

# 10, 20, 40 Meters




## 40 Meters

This Skywalker holds the North American contact record for 40 meters. A two element compact antenna, it has the performance that you want for 7 MHz work. The dipole center insulator is heavy duty with a twin terminal 50 Ohm connection. It is by far the most popular two element 40 meter beam!

## 20 Meters

Our four-element 20 meter Skywalker and its three element compact version will punch your signal through the QRM.

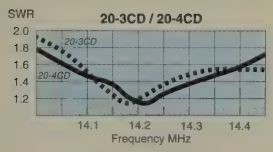
Stainless steel fasteners and double U-bolt brackets ensure that your antenna will last for years.

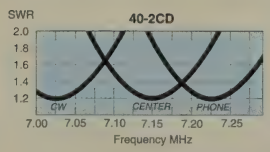
## 10 Meters TEN-3

Looking for a lightweight, economical alternative to the 10 meter Skywalkers? Choose the TEN-3. Although its popular with novices and technicians, this antenna is for any ham who wants more gain with a good front to back ratio on 10 meters. This antenna has an 8 foot boom making it easy to install on a very simple mount with only a lightweight rotator. The matching system is our proven Reddi Match for 50 Ohm no balun feed and SO-239 connector. Make more positive contacts with the new TEN-3.

| MODEL | 40-2CD | TEN-3 |
|---|---|---|
| Frequency, MHz | 7.0-7.3 | 28-29.7 |
| No. Elements | 2 | 3 |
| Forward Gain, dBd | 5.5 | 8 |
| Front to Back Ratio, dB | 20 | 25 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth, KHz | 200 | >1500 |
| Power Rating, Watts PEP | 2000 | 2000 |
| 3dB Beamwidth, Degrees | | |
| E Plane | 70 | 64 |
| Side Lobe Attenuation | >40 | >40 |
| Boom Length, ft (m) | 23(6.9) | 8 (2.44) |
| Boom Diameter, in (cm) | 2.13-1.88(5.4-4.8) | 1.38-1.25(3.5-3.2) |
| Longest Element, ft (m) | 43 (12.9) | 18 (5.49) |
| Element Center Dia., in (cm) | 1.25 (3.1) | .75 (1.9) |
| Turning Radius, ft (m) | 23.93 (7.29) | 9.8 (3.0) |
| Mast Size Range, in (cm) | 1.5-2(3.8-5.1) | 1.5-2(3.8-5.1) |
| Wind Load, $ft^2$ ($m^2$) | 6.38 (.57) | 2.0 (.20) |
| Weight, lb (kg) | 44 (19.8) | 9.9 (4.45) |

| MODEL | 20-4CD | 20-3CD |
|---|---|---|
| Frequency, MHz | 14.0-14.35 | 14.0-14.35 |
| No. Elements | 4 | 3 |
| Forward Gain, dBd | 10.0 | 8.0 |
| Front to Back Ratio, dB | 30 | 30 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth, KHz | >400 | >300 |
| Power Rating, Watts PEP | 2000 | 2000 |
| 3dB Beamwidth, Degrees | | |
| E Plane | 56 | 57 |
| Side Lobe Attenuation, dB | >40 | >40 |
| Boom Length, ft (m) | 32 (9.75) | 20 (6.1) |
| Boom Diameter, in (cm) | 2.13-1.88(5.4-4.8) | 2.0 (5.08) |
| Longest Element, ft (m) | 36.08 (11.00) | 35.95(10.96) |
| Element Center Dia., in (cm) | 1.25 (3.1) | 1.25 (3.1) |
| Turning Radius, ft (m) | 23.75 (7.2) | 20 (6.1) |
| Mast Size Range, in (cm) | 1.5-2(3.8-5.1) | 1.5-2(3.8-5.1) |
| Wind Load, $ft^2$ ($m^2$) | 8.1 (.75) | 5.5 (.51) |
| Weight, lb (kg) | 55 (24.95) | 30 (13.61) |



# 2 Meters

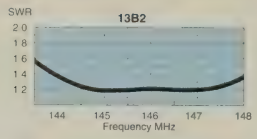
## 17B2 - 17 Element CW/SSB

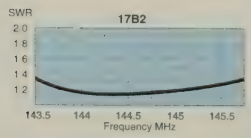
The serious two meter operator who is interested in EME, aurora, scatter, SSB, CW, tropo etc, will choose the 17B2. It has 17 elements on a 4.5 wavelength boom. Our computer-aided design supported by precise test range data and the latest manufacturing technology gives you a cleaner pattern and 18 dBd gain in this long boom design. Significant enhancement is provided by the new UltraMatch balanced feed system with N-connector. The improved Boomer brace system is easier to install. 17B2 is a new stronger Boomer with a cleaner profile, less weight and wind load. All these features result in contest winning performance and more day to day operating enjoyment.

## 13B2 -13 Element Wideband

The new 13B2 is as versatile as the 17B2 is specialized. 13B2 will be your choice for high performance across the entire 2 meter band. New and experienced hams will enjoy 15.8 dBd gain on FM, packet, CW, or sideband across the 4 MHz operating range. The 13B2 is easily mounted vertically or horizontally for maximum performance on your favorite mode. Its optimum boom length makes it a popular antenna that fits just about anywhere. The new UltraMatch balanced feed on the 13B2 provides a 50 Ohm match via a standard SO-239 UHF female connector.

| MODEL | 13B2 | 17B2 |
|---|---|---|
| Frequency, MHz | 144-148 | 144-145 |
| No. Elements | 13 | 17 |
| Forward Gain, dBd | 15.8 | 18.0 |
| Front to Back Ratio, dB | 26 | 26 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth, MHz | >4 | >2 |
| Power Rating, Watts PEP | 2000 | 2000 |
| 3 dB Beamwidth, Degrees | | |
| E Plane | 2 x 18 | 2 x 14.5 |
| H Plane | 2 x 19 | 2 x 15 |
| Side Lobe Atten., dB, E Plane | >60 | >60 |
| Boom Length, ft (m) | 15 (4.57) | 31 (9.45) |
| Electrical Wavelength | 2.2 | 4.5 |
| Longest Element, in (cm) | 39.75 (101) | 40.75 (103.5) |
| Turning Radius, ft (m) | 8.9 (2.7) | 17.25 (5.26) |
| Mast Size Range, in (cm) | 1.5-2 (3.8-5.1) | 1.5-2 (3.8-5.1) |
| Wind Load, $ft^2$ ($m^2$) | 1.8 (.17) | 3.9 (.36) |
| Weight, lb (kg) | 6.7 (.31) | 15.75 (7.14) |




Boomers are easily stacked for more gain. See page 17 for details.

*"The 13B2 was very easy to assemble. Very good instructions. High quality parts. A very neat looking antenna." (NM8T)*

*"Reliable contacts [on 13B2] to repeaters 100 miles using low power. Horizontally polarized 150 miles plus." (N9MHV)*

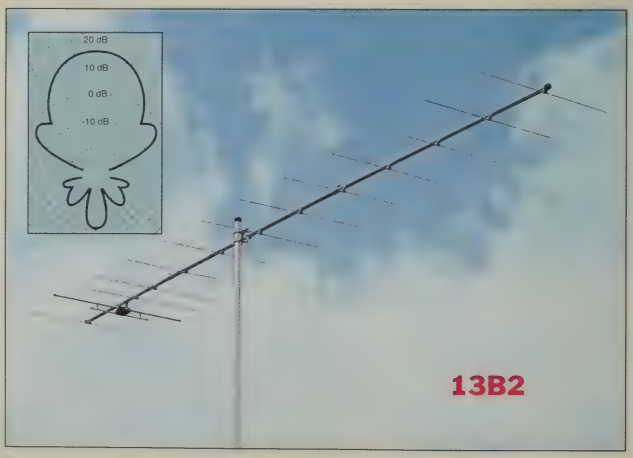
*"New 17B2 is nice improvement over 4218XL both mechanically and electrically." (VE3ASO)*

## The Boomer tradition continues.

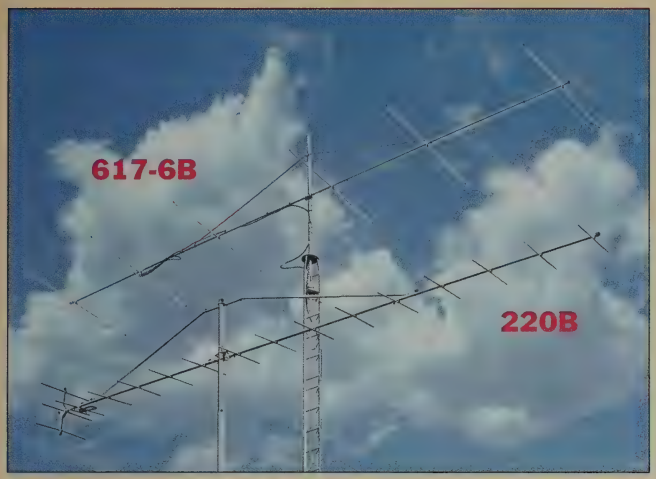
*New Boomers offer more gain and cleaner patterns with greater mechanical strength. New element spacings and lengths plus an improved feed system make it happen. Select from the 17B2 for the strongest signal on the low end of the band or the 13B2 for broadband performance across the band.*

*Cushcraft Boomers all feature solid rod elements, stainless steel hardware and very easy to follow assembly instructions. Simple tools and a little time are all that are needed for assembly. The new Boomer line will make your operating time more rewarding and enjoyable. Move up to the new Boomers today.*

*The new Cushcraft UltraMatch is a modified T-match system that provides a balanced current distribution on your Boomer. It uses UltraLink teflon® dielectric cable allowing for low loss high power applications. UltraMatch is completely enclosed for weather proofing. UltraMatch features an N-connector on the 17B2 and UHF SO239 on the 13B2. When all weather performance is important, you will choose the new UltraMatched Boomers everytime.*



# 70 CM, 1¼, 6 Meters



## Two NEW 70 CM Yagis

These new Cushcraft antennas are designed for easy assembly. The elements are mounted atop the boom with stainless traditional hardware. The feed systems employ a UM4N balun enclosed in a UV stabilized housing. The 719B uses a broadband folded dipole while the 729B utilizes a modified T-match.

## 1-1/4 Meters

We took the features of our 2 meter antennas and incorporated them into a high-gain 1-1/4 meter antenna that is perfect for this fast growing band. You will have more fun with Cushcraft!

## 6 Meters

Our 617-6B has more gain than any antenna in its class! The serious 6 meter operator will appreciate the features of this great performing Boomer. Find out for yourself.

| MODEL | 617-6B | 220B |
|---|---|---|
| Frequency, MHz | 50-51 | 222-223 |
| No. Elements | 6 | 17 |
| Forward Gain, dBd | 14.0 | 17.2 |
| Front to Back Ratio, dB | 30 | 30 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth MHz | >1 | >2 |
| Power Rating, Watts PEP | 2000 | 2000 |
| 3 dB Beamwidth, Degrees | | |
| E Plane | 2 x 19 | 2 x 13 |
| H Plane | 2 x 20 | 2 x 14 |
| Side Lobe Atten., dB, E Plane | 60 | 60 |
| Boom Length, ft (m) | 34 (10.36) | 19 (5.8) |
| Electrical Wavelength | 1.7 | 4.2 |
| Longest Element, in (cm) | 117 (297.2) | 26 (66.2) |
| Turning Radius, ft (m) | 17.7 (5.39) | 9 (2.64) |
| Mast Size Range, in (cm) | 1.5-2 (3.8-5.1) | 1.5-2 (3.8-5.1) |
| Wind Load, $ft^2$ ($m^2$) | 4.8 (.45) | 2.6 (.24) |
| Weight, lb (kg) | 26 (11.79) | 10.5 (4.77) |

## 719B FM, CW and SSB 15.5 dBd

Looking for an antenna to enhance performance on all modes of the 70 CM band? The 13.5 foot long 719B is the right choice. Mount it vertical for FM or horizontal for CW and Sideband. The 719B joins the 2 meter 13B2 as a classic for improved performance.

## 729B CW and SSB 17.8 dBd

This is the new leader in performance for 70 CM activity. Assembly is easy. Tuning is even easier with our modified T-matching network. The modified-T allows for increased bandwidth over conventional T-matches. It includes capacitive elements which allow for more adjustment. Teflon® cable is used for power efficiency. The non-drooping boom does not require a support strut. Mount several in an array for increased gain.

| MODEL | 719B | 729B |
|---|---|---|
| Frequency, MHz | 430-450 | 430-440 |
| No. Elements | 19 | 29 |
| Forward Gain, dBd | 15.5 | 17.8 |
| Front to Back Ratio, dB | 25 | 25 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth MHz | 20 | >10 |
| Power Rating, Watts PEP | 2000 | 2000 |
| 3 dB Beamwidth, Degrees | | |
| E Plane | 24 | 20 |
| H Plane | 19 | 22 |
| Side Lobe Atten., dB, E Plane | 60 | 60 |
| Boom Length, ft (m) | 13.5 (4.1) | 22.17 (6.75) |
| Electrical Wavelength | 6 | 9.8 |
| Longest Element, in (cm) | 13.75 (34.9) | 13.75 (34.9) |
| Turning Radius, ft (m) | 7.25 (2.2) | 12.5 (3.8) |
| Mast Size Range, in (cm) | 1.25-2 (3.2-5.1) | 1.25-2 (3.2-5.1) |
| Wind Load, $ft^2$($m^2$) | 1.2 (.11) | 2.2 (.21) |
| Weight, lb (kg) | 5.6 (2.55) | 8.6 (3.9) |

# 1¼, 2 Meters

## 13B2 - 13 Element Wideband

Boomer evolution continues with the 13B2. This new design is lighter weight, lower profile and has more gain and a cleaner pattern. New technicians and experienced hams will enjoy 15.8 dBd gain on FM, packet, CW, or sideband. 13B2 is easily mounted vertically for greatest FM distance and enjoyment. Its optimum boom length makes it a popular antenna that fits almost anywhere. The new balanced UltraMatch provides a 50 Ohm UHF connector for easy feedline attachment. Stronger performance in the 215WB tradition will be yours with the 13B2.

## 124WB - 4 Element Wideband

This is the right choice for packet systems and other applications requiring a dedicated directional antenna.

*All of these antennas give you hot performance with light weight and minimum windload. Stainless steel hardware, solid rod elements and hard drawn aluminum tubing assure you that the antenna will last.*

| MODEL | 124WB | 13B2 | 26B2 |
|---|---|---|---|
| Frequency, MHZ | 144-148 | 144-148 | 144-148 |
| No. Elements | 4 | 13 | 26 |
| Forward Gain, dBd | 10.2 | 15.8 | 18.8 |
| Front to Back Ratio, dB | 19 | 26 | 26 |
| SWR 1.2:1 Typical | | | |
| 2:1 Bandwidth, MHz | >4 | >4 | >4 |
| Power Rating, Watts PEP | 2000 | 2000 | 2000 |
| 3dB Beamwidth, Degrees | | | |
| E Plane | 60 | 2x18 | 2x18 |
| H Plane | 88 | 2x19 | 2x9.5 |
| Side Lobe Attenuation, | | | |
| dB, E Plane | 40 | >60 | >60 |
| Boom Length, ft (m) | 4 (1.22) | 15 (4.57) | 15 (4.57) |
| Electrical Wavelength | .5 | 2.2 | 2.2 |
| Longest Element, in (cm) | 40.75 (104) | 39.75 (101) | 39.75 (101) |
| Turning Radius, ft (m) | 4 (1.22) | 8.9 (2.7) | 10.4 (3.18) |
| Mast Size Range, in (cm) | 1.25-2 | 1.5-2 | 1.5-2 |
| | (3.2-5.1) | (3.8-5.1) | (3.8-5.1) |
| Wind Load, $ft^2$ ($m^2$) | .34 (.034) | 1.8 (.17) | 4.84 (.45) |
| Weight, lb (kg) | 3 (1.36) | 6.7 (.31) | 21.5 (9.75) |

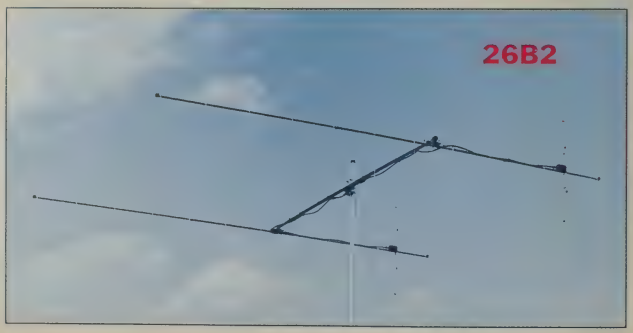
## 224WB/225WB - 220 MHz Widebands

Perfect for the novice phone band and other 220 MHz operation.

| MODEL | 224WB | 225WB |
|---|---|---|
| Frequency. MHZ | 222-225 | 222-225 |
| No. Elements | 4 | 15 |
| Forward Gain, dBd | 10.2 | 15.5 |
| Front to Back Ratio, dB | 24 | 24 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth, MHz | >5 | >5 |
| Power Rating, Watts PEP | 2000 | 2000 |
| 3dB Beamwidth, Degrees | | |
| E Plane | 60 | 2x17 |
| H Plane | 88 | 2x19 |
| Side Lobe Attenuation, | | |
| dB E Plane | 40 | 60 |
| Boom Length, ft (m) | 3 (.91) | 10 (3.05) |
| Electrical Wavelength | 0.5 | 2.2 |
| Longest Element, in (cm) | 26.7 (68) | 26.3 (67) |
| Turning Radius, ft (m) | 3 (.91) | 5.8 (1.78) |
| Mast Size Range, in (cm) | 1.25-2 | 1.25-2 |
| | (3.2-5.1) | (3.2-5.1) |
| Wind Load, $ft^2$ ($m^2$) | .23 (.021) | .95 (.09) |
| Weight, lb (kg) | 1.7 (.77) | 5.25 (2.4) |

## 26B2 - 26 Element Wideband

This antenna offers the highest gain of any 2 meter FM antenna in the world. Select the 26B2 when you need to work repeaters or simplex over extreme distances.



# 70 CM, 2 Meters

*Cushcraft brings you the leading edge of dual band technology with new 70cm/2m products - The All-American Dual Bander, a high performance fiberglass base antenna, the long range AR270B and the CS270M mobile mag-mount. These great products will complement our already proven AR270 dual band compact base antenna.*

## AR-270B 5.5/7.5 dB Dual Band Ringo

This all new model gives very high gain with a low angle of radiation and it is only 7.7 feet (2.35 m) high. The AR270B is computer optimized with two 5/8 wavelength collinear elements on 2 meters and four 5/8 wavelength elements on 70 cm. It is broadbanded for minimum SWR on both bands. It is easy to assemble with three rugged aluminum tubing sections, a durable mast mount and factory sealed coils for best performance.

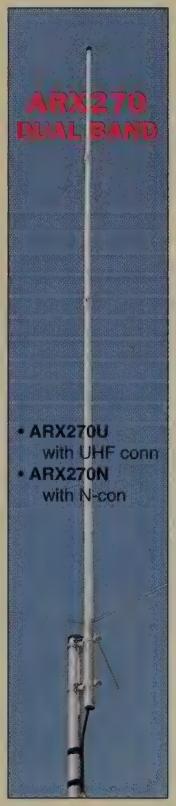
| MODEL | AR270 | | AR270B | |
|---|---|---|---|---|
| Frequency, MHz | 144-148 | 430-450 | 144-148 | 430-450 |
| SWR 1.2:1 Typical | | | | |
| 2:1 Bandwidth, MHz | >4 | >15 | >4 | >15 |
| Gain, dB | 3.7 | 5.5 | 5.5 | 7.5 |
| Power, Watts FM | 250 | 250 | 250 | 250 |
| Horizontal Radiation Pattern, Degrees | 360 | 360 | 360 | 360 |
| Height, ft, (m) | 3.75 (1.13) | | 7.7 (2.3) | |
| Mast Size Range, in | 1.25-2 (3.2-5.1) | | 1.25-2 (3.2-5.1) | |
| Radial Length, in (cm) | 6.75 (17.1) | | 6.75 (17.1) | |
| Wind Load, ft2 (m2) | 0.27 (0.03) | | 0.47 (0.044) | |
| Weight, lb (kg) | 2 (0.9) | | 2.4 (1.09) | |

## AR270 3.7 / 5.5 dB Dual Band Ringo

The "Dual Wonder" AR270 is only 3.75 feet (1.1 meters) high. It has great performance for its size, making it the most popular 2m/70 cm base antenna.

## All-American Dual Band Ringo

Cushcraft's new ARX270 high performance fiberglass base antenna yields a gain of 9 dB on VHF and 12 dB on UHF. Our exclusive non-metallic UV stabilized couplings result in the cleanest pattern of any dual band antenna. The radome is bright white, thick-wall fiberglass that will survive 90 mph winds. The three section design allows easy assembly and is U.P.S. shippable. Our sleek extruded base clamps eliminate vibration and they look great. Professional features like the factory installed pigtail feed and choice of UHF or N connector makes weather-proof connections easy. These technical innovations put the ARX270 miles ahead. The All-American Dual Bander comes factory tuned and does not require any adjustments. The ultimate in dual-band FM enjoyment can be yours with the ARX270.

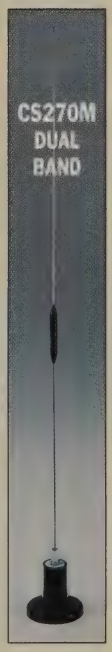



## Introducing Cushcraft Gold!

### The Gold Standard in Mobile Design!

Style, Performance, and Price. Cushcraft selected an award winning industrial design firm to develop an aesthetically pleasing, unique profile for automotive travel in the 90's, and our RF design team engineered in new standards of quality, performance and features. We call it Cushcraft Gold. This slim-line, aerodynamic design antenna provides 5.5 dB on 440 and 3.7 dB on 2 meters. Cushcraft Gold starts with a solid brass base which is nickel plated, then powder coated to look and work like new for years. The base assembly is engineered to resist shock and vibration. A stainless steel spring and nickel plated base contact assure maximum RF transfer. The weather resistant rubber O-ring around the base, helps keep out moisture and provides for scratch free roof-mounting. Both the base matching network and the center phasing coil are housed, inside temperature and shock-resistant Delrin®. The whip is heavy duty stainless-steel to resist corrosion. We've even included a unique tilt-over feature so you don't have to remove the whip to enter a garage with a low ceiling. This is all the antenna you'll need for years of trouble-free communications. Available with Mag-mount or mount to existing 3/4" roof mount.

| MODEL | ARX270U/N | |
|---|---|---|
| Frequency, MHz | 144-148 | 430-450 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth, MHz | >4 | >20 |
| Gain, dB | 9 | 12 |
| Power Rating, Watts FM | 200 | 200 |
| Horizontal Radiation Pattern, Degrees | 360 | 360 |
| Height, ft, (m) | 16.5 (5) | |
| Mast Size Range, in | 1.25-2 (3.2-5.1) | |
| Radial Length, in (cm) | 20.5 (52.1) | |
| Wind Load, ft2 (m2) | 0.95 (0.088) | |
| Weight, lb (kg) | 5 (2.3) | |




## CS270M

### 70 CM / 2M Mobile

The CS270M offers the most gain possible in its compact size. It has 6 dB on 440 and 3.7 dB on 2 meters all in a 36-1/2" tall design. The small coil is insert molded into the center of the radiator. No moisture can penetrate the coil with this technique. The magnetic mount features a clinging 90 pound pull and a roof-protecting rubber pad. The feed line is double shielded Teflon® UltraLink Cable.™ Its low-loss, high temperature and designed to last. The CS270M has all of the features you will need in a dual-band mobile antenna.

See page 12.

# 70 CM, 1¼, 2 Meters

## Our Ringos are Number One.

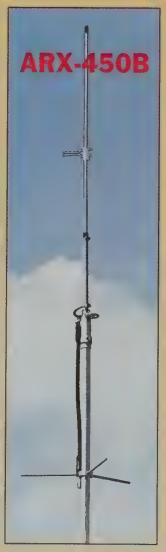
*Tough performers at a good price! The Ringo family of dependable, cost-effective antennas has served more hams - from novice to veteran extra - than any other amateur antenna made. Simple, straightforward design, light weight and quick, easy installation make the durable Ringo family right for you. Ringo's top performance and low cost mean more dB per dollar - an equation anyone can appreciate.*

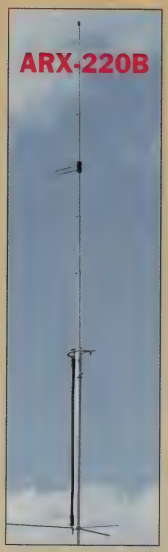
## Ringo Ranger II

Our Ringo Ranger II has more gain, less windload, and more mechanical integrity than other two meter antennas. You'll quickly appreciate the benefits of this amazing antenna! Based on the original W1BX Ringo, the Ringo Ranger II is the latest design featuring three 5/8 wave radiating elements and an adjustable 1/8 wave phasing stub. The result is a very low angle of radiation over your coverage area.

The Ringo Ranger II has built-in lightning protection, UV-stabilized insulators, heavy wall tubing, improved decoupling radials to eliminate feedline radiation, and all-weather performance. The ARX-450BN has all the features of the standard antenna plus N-connector.

| MODEL | ARX-2B | ARX-220B | ARX-450B |
|---|---|---|---|
| Frequency, MHz | 135-160 | 222-225 | 435-450 |
| SWR 1.2:1 Typical | | | |
| 2:1 Bandwidth, MHz | >3 | >5 | >10 |
| Gain, dB | 7.0 | 7.0 | 7.0 |
| Power Rating, Watts FM | 1000 | 500 | 500 |
| Radiation Angle, Deg. | 7 | 7 | 7 |
| Horizontal Radiation Pattern, Degrees | 360 | 360 | 360 |
| Ring Diameter, in (cm) | 5 (12.7) | 5 (12.7) | 3.5 (8.9) |
| Radiator Base Dia, in (cm) | .75 (1.9) | .75 (1.9) | .50 (1.2) |
| Height, ft, (m) | 14 (4.3) | 9.3 (2.8) | 4.9 (1.5) |
| Mast Size Range, in (cm) | 1.0-1.25 (2.54-3.1) | 1.0-1.25 (2.54-3.1) | .75-.88 (1.9-2.22) |
| Radial Length, in (cm) | 20.5 (52.1) | 13.75 (33.7) | 6.75 (17.1) |
| Wind Load, ft$^2$ (m$^2$) | 0.5 (0.05) | 0.3 (0.03) | 0.2 (0.02) |
| Weight, lb (kg) | 6 (2.7) | 5 (2.3) | 1 (.45) |



**Some hams comment on the ARX-2B:**
*"Since I put this antenna up I have received many compliments on the improvement of my signal." (N3LHP)*

*"The only antenna I ever installed that worked like it should the first time." (N7PGH)*

*"ARX-2B is a good antenna for my use on 2 meters FM...Several on the air in my area." (N9OPL)*

*"ARX-2B...the best antenna." (XE2CLB)*

| MODEL | A270-10S | | A270-6S | |
|---|---|---|---|---|
| Frequency, MHZ | 144-148 | 430-450 | 144-148 | 430-450 |
| No. Elements | 5 | 5 | 3 | 3 |
| Forward Gain, dBd | 10 | 10 | 7.8 | 7.8 |
| Front to Back Ratio, dB | 20 | 18 | 20 | 18 |
| SWR 1.2:1 Typical | | | | |
| 2:1 Bandwidth, MHz | ≥4 | ≥10 | ≥4 | ≥20 |
| Power Rating, Watts PEP | 350 | 350 | 350 | 350 |
| 3dB Beamwidth, Degrees | | | | |
| E Plane | 52 | 52 | 66 | 66 |
| H Plane | 60 | 60 | 108 | 108 |
| Boom Length, ft (m) | 6.17 (1.9) | | 2.8 (.85) | |
| Longest Element, in (cm) | 40.3 (102.4) | | 41 (104.1) | |
| Turning Radius, ft (m) | 6 (1.8) | | 2.8 (.85) | |
| Mast Size Range, in (cm) | 1.25-2 (3.2-5.1) | | 1.25-2 (3.2-5.1) | |
| Wind Load, ft$^2$ (m$^2$) | .725 (.07) | | .3 (.02) | |
| Weight, lb (kg) | 1.8 (.81) | | 1.7 (.8) | |

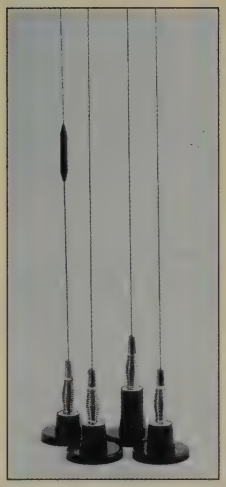
## A270-10S and A270-6S
### 10 and 7.8 dB Dual Band Yagis

Increase your range by selecting one of the new Cushcraft dual band Yagis on 2 meters and 70 cm. You can point the antenna at stations while you are in QSO with them. This will direct more of your output power when transmitting at the same time reducing interference and increasing signal strength when receiving. These antennas are perfect for packet applications. Assembly is a snap with our fully illustrated assembly manuals. The A270-10S has nearly twice the performance of the A270-6S. Select the antenna for your station depending on the distance of your contacts.

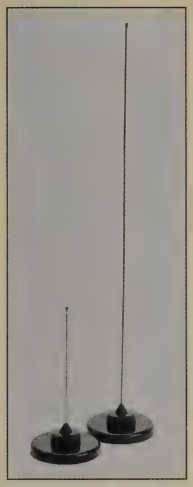
# 70 CM, 1¼, 2, 6, 10 Meters

*Cushcraft/Signals mobiles offer the high performance that you need for consistent and mobile communications such as commuting and public service activities. These antennas are the choice of hams and communications professionals around the world who demand high quality, premium products.*

SEE YOUR LOCAL DEALER'S CUSHCRAFT MOBILE DISPLAY



GAIN MOBILE ANTENNAS

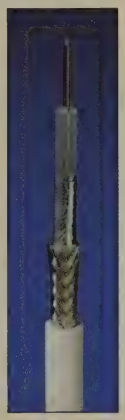


QUARTERWAVE MOBILES

BLACK MAG MOUNT

TRUNK LIP MOUNT

UltraLink Cable™



## UltraLink™ Cable

Cushcraft UltraLink cable was designed specifically for high efficiency commercial mobile applications to 900 MHz. UltraLink's RG-58 size allows easy installation through the tightest openings, while its Teflon® dielectric provides the highest temperature tolerance to handle vehicle hot-spots that would melt other dielectric materials. Additional 100% shielding is provided by a jacket of easy-peel foil. All this is covered by 97% braid for easy, secure connector attachment. More of your signal will get through with UltraLink than with any other mobile cable.

## CS28M Ten Meter Mag-Mount

Work a new country while you wait for the light to change. Introduced just last year, the CS28M ten meter mag-mount has become a constant companion to today's popular 10 meter multimode mobile rigs. The CS28M comes complete, ready to go with a 49" stainless steel whip and spring and a Euro-Style black poly-coated 90 pound pull magnet. A heavy rubber pad protects your car's finish; twelve feet of Cushcraft's own UltraLink™ low-loss cable (specifically designed for commercial mobile applications to 900 MHz) and PL259 connector are included with the CS28M.

## Gain and Quarterwave Mobile Antennas

Cushcraft's years of commercial and amateur experience apply cutting-edge designs to consistently high quality materials to produce the best mobile antennas you can buy.

All inductors (and even the coil contacts) are silver plated for better RF conductivity, and all Cushcraft mobile hardware is brass to prevent the seizing inherent with inferior, dissimilar-metal joints. All Cushcraft mobile coil housings are ABS, impervious to temperature changes and ultraviolet radiation. Brass base threads, ultrasonically welded into coil housings, eliminate premature failures associated with inferior fastening techniques, and Cushcraft insert-molded 440 MHz phasing coils assure weather-tight integrity. Only Cushcraft mobile antenna mounts are entirely 50 Ohms, eliminating lossy "VSWR bumps" common in many well known designs. Cushcraft quarter-wave models (CS1147 and CS1450) are broadband, require no tuning and include UltraLink™ low loss cable.

## Magnetic Mounts

Cushcraft mag-mounts stay where you put them. Our 90 pound pull magnets are the strongest you'll find. Euro-style black poly finish protects against rust, and a tough rubber pad gives maximum protection to your vehicle's finish. Ultra-Link™ cable on all Cushcraft mobile antennas means more of your signal reaches your antenna every time you key the mike.

| Model No. | Frequency MHz | Whip Length in | Whip Length m | Description |
|---|---|---|---|---|
| CG270A | 144-148 / 440-450 | 34 | .86 | 3/4" Hole |
| CG270AE | 144-146 / 430-440 | 34 | .86 | 3/4" Hole |
| CG144A | 144-148 | 49 | 1.25 | 3/4" Holw |
| CG144AE | 144-146 | 49 | 1.25 | 3/4" Hole |
| CS270M | 144-148/440-450 | 34 | .86 | Magnetic |
| CS270A | 144-148/440-450 | 34 | .86 | Coil & Whip |
| CS147M | 144-174 | 49 | 1.25 | Magnetic |
| CS147T | 144-174 | 49 | 1.25 | Trunk Lip |
| CS147 | 144-174 | 49 | 1.25 | 3/4" Hole |
| CS147A | 144-174 | 49 | 1.25 | Coil & Whip |
| CS1147M | 144-148 | 20 | .5 | Magnetic |
| CS220M | 222-225 | 33 | .84 | Magnetic |
| CS220T | 222-225 | 33 | .84 | Trunk Lip |
| CS220 | 222-225 | 33 | .84 | 3/4" Hole |
| CS450M | 435-470 | 29.5 | .75 | Magnetic |
| CS450T | 435-470 | 29.5 | .75 | Trunk Lip |
| CS450 | 435-470 | 29.5 | .75 | 3/4" Hole |
| CS1450M | 430-450 | 7 | .17 | Magnetic |
| CS50M | 46-54 | 49 | 1.25 | Magnetic |
| CS50T | 46-54 | 49 | 1.25 | Trunk Lip |
| CS50 | 46-54 | 49 | 1.25 | 3/4" Hole |
| CS28M | 28-30 | 49 | 1.25 | Magnetic |
| CSMG | 90 lb pull mag mount, PL259 & 12 ft UltraLink Cable® | | | |
| CSMGN | 90 lb pull mag mount, N-conn & 12 ft UltraLink Cable® | | | |

# 70 CM, 1¼, 2, 6, 10 Meters

cushcraft CORPORATION

## Ringo Ranger

### NEW ARX-6

The ARX-6 was developed to meet the needs of serious 6 meter FM hams. It has twice the gain of the standard AR-6. If your operating style requires the most gain and wide-area coverage from a repeater or home station, the ARX-6 is made for you.

### ARX-2

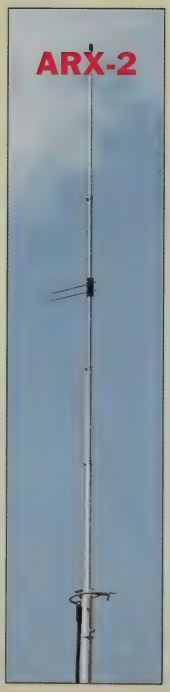
This is the 2 meter antenna that combines good gain with compact size. If space does not allow extra height or decoupling radials, the ARX-2 will do the job.

| MODEL | ARX-6 | ARX-2 |
|---|---|---|
| Frequency, MHz | 50-54 | 135-160 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth, MHz | >4 | >6 |
| Gain, dB | 5.5 | 5.5 |
| Pwr Rating, Watts FM | 1000 | 1000 |
| Radiation Angle, Deg. | 16 | 16 |
| Horizontal Radiation Pattern, Degrees | 360 | 360 |
| Ring Diameter, in (cm) | 13 (33) | 5 (12.7) |
| Base Dia, in(cm) | 2 (5.1) | 1.5 (3.8) |
| Height, ft, (m) | 24 (7.3 | 9.3 (2.8) |
| Mast Range, in (cm) | 1.5-1.75 (3.8-4.4) | 1-1.25 (2.54-3.2) |
| Wind Load, $ft^2$ ($m^2$) | 1.9 (.18) | .33 (.03) |
| Weight, lb (kg) | 7.5 (3.4) | 4 (1.8) |

## Ringo

These are the original W1BX FM Ringos. If you want a combination of compact size, wide bandwidth, a low radiation angle, these economical antennas are just for you. Since radials are not needed, you can even use our Ringos indoors. Our Ringos are 1/2 wave and include built-in lightning protection. Put up one of these easily installed antennas and start enjoying FM!

| MODEL | AR-2 | AR-6 | AR-10 | AR-220 | AR-450 |
|---|---|---|---|---|---|
| Frequency, MHz | 135-160 | 50-54 | 28-29.7 | 222-225 | 440-460 |
| SWR 1.2:1 Typical | | | | | |
| 2:1 Bandwidth, MHz | 10 | 2 | >1.5 | 10 | 20 |
| Gain, dB | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 |
| Power Rating, Watts FM | 1000 | 1000 | 1000 | 500 | 500 |
| Radiation Angle, Deg. | 16 | 16 | 16 | 16 | 16 |
| Horizontal Radiation Pattern, Degrees | 360 | 360 | 360 | 360 | 360 |
| Ring Diameter, in (cm) | 5 (12.7) | 13 (33) | 13 (33) | 5 (12.7) | 3.5 (8.9) |
| Radiator Base Dia, in(cm) | .75 (1.9) | 1 (2.5) | 1 (2.5) | .75 (1.9) | .5 (1.3) |
| Height, ft, (m) | 3.9 (1.2) | 10.1 (3.1) | 17.6 (5.36) | 2.6 (.78) | 1.4 (.43 |
| Mast Size Range, in (cm) | 1-1.25 (2.54-3.1) | 1-1.25 (2.54-3.1) | 1-1.25 (2.54-3.1) | 1-1.25 (2.54-3.1) | .75-.88 (1.9-2.22) |
| Wind Load, $ft^2$ ($m^2$) | .21 (.02) | .37 (.03) | 1.68 (.16) | .21 (.02) | .1 (.01) |
| Weight, lb (kg) | 1.5 (.68) | 2.5 (1.1) | 4 (1.8) | 1.2 (.55) | 1 (.45) |

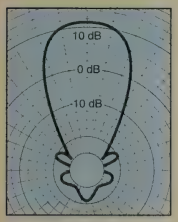


## Four Pole Arrays

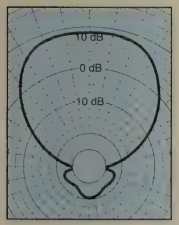
Cushcraft's four 1/2 wave dipole array is perfect for your repeater or as a powerful base antenna. Strong through-the-boom dipole mounting ensures long life and superior electrical characteristics. The dipoles mount to your tower's legs or on a separate support mast (not included). They can be arranged for omni or elliptical patterns.

| MODEL | AFM-4DA | AFM-24DA | AFM-44DA |
|---|---|---|---|
| Frequency, MHz | 144-148 | 222-225 | 435-450 |
| Gain, dBd | 9 Offset 6 Omni | 9 Offset 6 Omni | 9 Offset 6 Omni |
| SWR 1.2:1 Typical | | | |
| 2:1 Bandwidth, MHz | >4 | >5 | >15 |
| Power Rating, Watts FM | 500 | 500 | 250 |
| Radiation Angle Degrees | 6 | 6 | 6 |
| Horizontal Radiation Pattern, Degrees | 360-Variable | 360-Variable | 360-Variable |
| Height, ft (m) | 23 (7.0) | 15 (4.5) | 8 (2.4) |
| Mast Size Range, in (cm) | 1.5-2.0 (3.8-5.1) | 1.5-2.0 (3.8-5.1) | 1.25-2.0 (3.2-5.1) |
| Wind Load, $ft^2$ ($m^2$) | 2.54 (.24) | 1.85 (.17) | 1.13 (.11) |
| Weight, lb (kg) | 7 (3.2) | 6 (2.7) | 5 (2.3) |

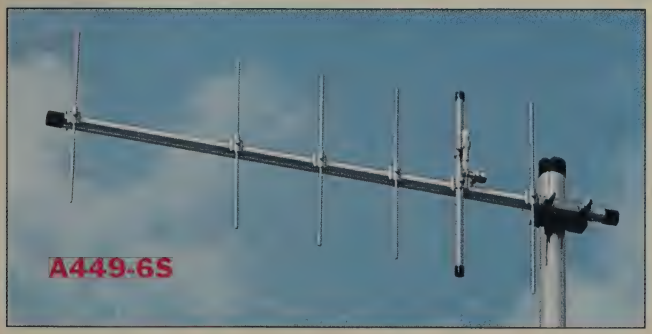
# 70 CM, 2 Meters




A148-10S




A148-3S




## Performance and Value Leaders

A148-10S and A148-3S are the newest computer optimized models of our 2 meter Yagis. We have improved both the pattern and gain of these antennas to give you better FM coverage. They have direct 50 Ohm Reddi-Match with SO239 connector and stainless steel hardware.

A148-3S is the low priced quality leader for Packet, FM or even portable use. It is easily rear mounted.

A148-10S is one of our best value designs with excellent gain and front-to-back ratio. Use it for long range FM or full band 2 meter operation.

For even higher gain the all new A148-20S is a complete antenna array with two ten element Yagis, stacking frame, harness and stainless steel hardware.

| Model | A148-3S | A148-10S | A148-20S |
|---|---|---|---|
| Frequency, MHz | 144-148 | 144-148 | 144-148 |
| No. Elements | 3 | 10 | 20 |
| Forward Gain, dBd | 7.8 | 13.2 | 16.2 |
| Front to Back Ratio, dB | 25 | 24 | 24 |
| SWR 1.2:1 Typical | | | |
| 2:1 Bandwidth, MHz | >5 | ≥4 | ≥4 |
| Power Rating, Watts PEP | 1000 | 1000 | 1000 |
| 3dB Beamwidth, Degrees | | | |
| E Plane | 66 | 40 | 20 |
| H Plane | 108 | 46 | 46 |
| Boom Length, ft (meters) | 2.8 (.85) | 12(3.6) | 12 (3.6) |
| Longest Element, in (cm) | 41 (104.1) | 40.3 (102.4) | 40.3 (102.4) |
| Turning Radius, ft (m) | 2.8 (.8) | 6 (1.8) | 6.6 (2.0) |
| Mast Size Range, in (cm) | 1.25-2.0 (3.2-5.1) | 1.25-2.0 (3.2-5.1) | 1.25-2.0 (3.2-5.1) |
| Wind Load, $ft^2$ ($m^2$) | 0.27 (0.02) | 1.21 (0.11) | 2.82 (0.26) |
| Weight, lb (kg) | 1.5 (0.7) | 6 (2.7) | 15 (6.8) |

| MODEL | A449-6S | A449-11S |
|---|---|---|
| Frequency, MHz | 440-450 | 440-450 |
| No. Elements | 6 | 11 |
| Forward Gain, dBd | 10.5 | 13.2 |
| Front to Back Ratio, dB | 18 | 20 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth, MHz | >10 | >10 |
| Power Rating, Watts PEP | 350 | 350 |
| 3dB Beamwidth, Degrees | | |
| E Plane | 60 | 48 |
| Boom Length, ft (m) | 2.9 (0.89) | 4.2 (1.35) |
| Longest Element, in (cm) | 13 (33) | 13 (33) |
| Turning Radius, ft (m) | 2.9 (.89) | 2.8 (.85) |
| Mast Size Range, in (cm) | 1.25-2.0 (3.2-5.1) | 1.25-1.5 (3.2-3.8) |
| Wind Load, $ft^2$ ($m^2$) | 0.30 (0.03) | 0.39 (0.04) |
| Weight, lb (kg) | 3 (1.4) | 4 (1.8) |

## Stacking Kits

Our VPK stacking kits for the antennas above are supplied complete with mounting boom, harness, and hardware.

| Antenna | Frequency MHz | Complete Kit | Harness Only |
|---|---|---|---|
| A148-3S | 144.5-148 | A14-VPKS | A14-SK |
| A148-10S | 144.5-148 | A148-VPKS | A148-SK |
| A449-6S | 440-450 | | A449-SK |
| A449-11S | 440-450 | A449-VPKS | A449-SK |

# 70 CM, 2 Meters

cushcraft CORPORATION

Reliable satellite communications will be yours with the new Cushcraft OSCAR antennas. The new 22XB two meter and 738XB 70 cm circularly polarized Boomer antennas offer the flexibility you need. Buy them both to create the best station possible or use a single antenna to upgrade an existing installation. Cushcraft provides polarization switches with both antennas. There are no additional options needed. Each antenna includes complete instructions on the mounting and installation of your OSCAR antenna system.

## NEW 22XB 2M OSCAR

Stronger signals will link your station with the satellite of your choice. Cushcraft's new 22XB OSCAR Boomer gives you the excellent performance that hams around the world have experienced with the Boomer antenna series. Clean patterns, 14 dBdc gain, superb circularity, and rugged construction are all part of the package. The polarity relay to switch from right to left circular polarization is included. These new designs are resistant to changes brought about by the weather. Construction of the 22XB features all stainless steel hardware. The boom is an extra rugged 1-1/2" diameter 6063-T832 aluminum alloy. Aim your new 22XB at the satellite and you'll be enjoying OSCAR at its best.

## NEW 738XB 70 CM OSCAR

Computer aided design and superior engineering are combined to make 738XB the finest 70 CM OSCAR antenna available. The longer boom means more gain. Thirty-eight optimally spaced elements on a rugged 14.3 foot boom mean 15.5 dBdc of gain for your station. Easily overcome the QRM and be on your way to more successful QSO's. Excellent ellipticity means that as the satellite rotates your signals will stay steady. Cushcraft's 738XB features a built-in polarity switcher. All stainless steel hardware, the rugged 6063-T832 aluminum boom, and the weather-sealed polarity switch all add up to the best choice for the serious OSCAR operator. Assemble a winning station by choosing Cushcraft satellite antennas.

| MODEL | 22XB | 738XB |
|---|---|---|
| Frequency, MHz | 144-148 | 432-438 |
| No. Elements | 22 | 38 |
| Forward Gain, dBdc | 14 | 15.5 |
| Front to Back Ratio, dB | 25 | 25 |
| Ellipticity dB at boresight | 2 | 2 |
| SWR 1.2:1 Typical | | |
| 2:1 Bandwidth, MHz | 4 | 6 |
| Power Rating, Watts PEP | 600 | 250 |
| 3dB Beamwidth, Degrees | | |
| E Plane | 30 | 24 |
| Boom Length, ft (m) | 19.33 (5.9) | 14.33 (4.37) |
| Longest Element, in (cm) | 39.19 (99.6) | 13.94 (35.4) |
| Turning Radius, ft (m) | 11 (3.35) | 8.5 (2.6) |
| Mast Size Range, in (cm) | 1.5-2.0 | 1.5-2.0 |
| | (3.8-5.0) | (3.8-5.0) |
| Wind Load, $ft^2$ ($m^2$) | 2.6 (.24) | 1.4 (.13) |
| Weight, lb (kg) | 11 (5) | 7.6 (3.5) |
| Polarity switch | Included | Included |

## NEW A148-20T 2 Meter Hi-Lo Cross Yagi

Here's the antenna that solves multi-mode problems! Ten vertically polarized and ten horizontally polarized elements provide 11.1 dBd gain covering 144-148 MHz. The horizontal elements handle your CW and SSB needs, while the vertical elements cover FM. Hardware is stainless steel.

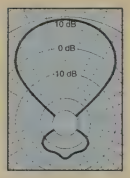
A148-20T has a boom length of 11 ft. (3.4m), longest element length of 40.6 in. (103cm), wind area of 1.21 $ft^2$ (.11$m^2$), and a mast size of 1.25-2 in. (3.2-5.1 cm).

# 70 CM, 2, 6 Meters

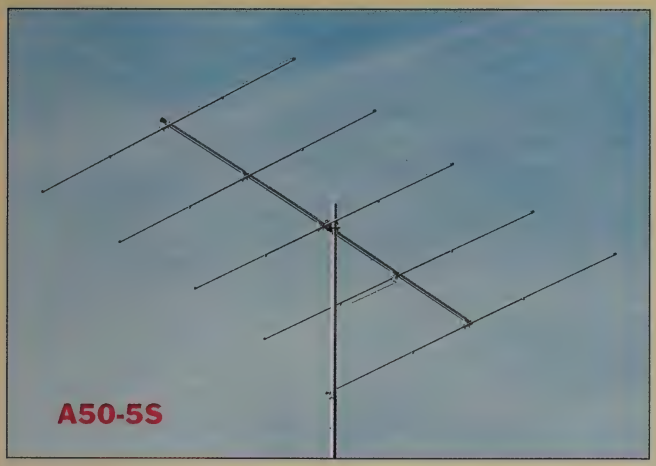
## 6 Meters

Computer-aided modeling and test range techniques were used by Cushcraft engineers to further optimize the performance of our popular 6 meter Yagis. This process means more gain and cleaner patterns with excellent front-to-back ratios. S-models have very broad bandwidth so they will not detune in bad weather. They feature stainless steel hardware for long trouble-free life. Enjoy the new popularity and exciting contacts on the 6 meter band with one of the S-series Cushcraft Yagis.

| MODEL | A50-3S | A50-5S | A50-6S |
|---|---|---|---|
| Frequency, MHZ | 50-54 | 50-54 | 50-54 |
| No. Elements | 3 | 5 | 6 |
| Forward Gain, dBd | 8 | 10.5 | 11.6 |
| Front to Back Ratio, dB | 20 | 24 | 26 |
| SWR 1.2:1 Typical | | | |
| 2:1 Bandwidth, MHz | >1 | >1 | >1 |
| Power Rating, Watts PEP | 1000 | 1000 | 1000 |
| 3dB Beamwidth, Degrees | | | |
| E Plane | 76 | 56 | 48 |
| Boom Length, ft (m) | 6 (1.8) | 12 (3.7) | 20 (6.1) |
| Longest Element, in (cm) | 117 (300) | 123 (312) | 119 (302) |
| Turning Radius, ft (m) | 6 (1.8) | 7.8 (2.37) | 11.5 (3.5) |
| Mast Size Range, in (cm) | 1.5-2 | 1.5-2 | 1.5-2 |
| | (3.8-5.1) | (3.8-5.1) | (3.8-5.1) |
| Wind Load, ft2 (m2) | 1.80 (0.17) | 2.9 (0.273) | 4.46 (.41) |
| Weight, lb (kg) | 7 (3.2) | 11 (5.0) | 18 (8.2) |




A50-6S RADIATION PATTERN




## 70 CM / 2 Meters

A148-10S is the latest generation of our incredible 2 meter Yagis. With its computer optimized design it has outstanding gain and pattern. This antenna is for SSB, CW, tropo or any mode. It has all stainless steel hardware and SO-239 connector. Assembly is quick with easy-to-follow instructions.

For 70 cm, the always popular A430-11S has been re-designed with all stainless steel hardware.

| MODEL | A144-7S | A148-10S | A430-11S |
|---|---|---|---|
| Frequency | 144-146 | 144-148 | 430-435 |
| No. Elements | 7 | 10 | 11 |
| Forward Gain, dBd | 11.1 | 13.2 | 13.2 |
| Front to Back Ratio, dB | 20 | 24 | 20 |
| SWR 1.2:1 Typical | | | |
| 2:1 Bandwidth, MHz | >3 | ≥4 | >10 |
| Power, Watts PEP | 1000 | 1000 | 350 |
| 3dB Beamwidth, Deg. | | | |
| E Plane | 46 | 40 | 38 |
| H Plane | | 46 | |
| Boom Length, ft (m) | 8.2 (2.5) | 12 (3.6) | 4.7 (1.40 |
| Longest Element, in (cm) | 40 (101.6) | 40.3 (102.4) | 14 (35.5) |
| Turning Radius, ft (m) | 4.9 (1.5) | 6 (1.8) | 2.6 (.81) |
| Mast Size Range, in (cm) | 1.5-2 | 1.25-2.0 | 1.25-1.5 |
| | (3.8-5.1) | (3.2-5.1) | (3.1-3.8) |
| Wind Load, $ft^2$ ($m^2$) | 0.81 (0.08) | 1.21(0.11) | 0.42 (.04) |
| Weight, lb (kg) | 4 (1.8) | 6 (2.7) | 3 (1.4) |

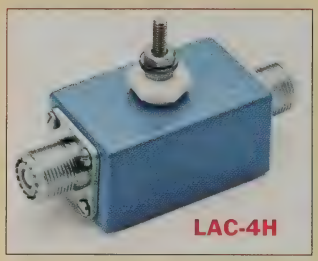
# Accessories

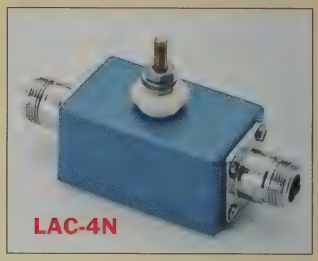
## Fast Acting Gas Discharge Lightning Arresters

Protect your valuable equipment from surges of up to 5,000 amperes with a Cushcraft constant impedance LAC4 arrester! The LAC4 has a replaceable gas discharge tube which clamps voltage surges to less than 50 volts in about 100 nanoseconds-much quicker than the voltage rise time of lightning.

You cannot afford to be without lightning protection. One of the models below is right for your shack.

| | |
|---|---|
| LAC4 | 200 Watt with UHF SO-239 connectors |
| LAC4H | 2 kW with UHF SO-239 connectors |
| LAC4N | 200 Watt with N connectors |
| LAC4NH | 2 kW with N connectors |
| LC2 | 200 Watt replacement cartridge |
| LC2KW | 2 kW replacement cartridge |




## Blitz Bug Lightning Arresters

Cushcraft also recommends this well-known series of arresters which are based on a patented three point static discharge design. The Blitz Bug has a sealed air chamber, constant static drain, and controlled voltage discharge.

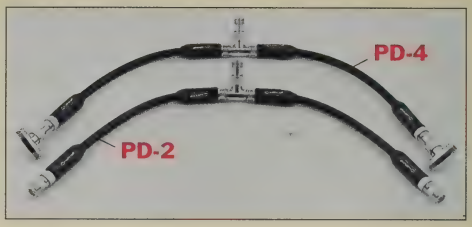
The Blitz Bug is rated at 2 kw PEP to 500 MHz with negligible insertion loss.

| | |
|---|---|
| LAC-1 | with UHF PL-259 and SO-239 connectors |
| LAC-2 | with UHF SO-239 connectors |

## Power Dividers For Boomers

Our power dividers make it a snap to stack Cushcraft Boomers. Models for 17B2 have N-connectors. They are available for these antennas:

| | |
|---|---|
| PD-2 | for two 13B2, 124WB |
| PD-2N | for two 17B2 |
| PD-4 | for four 13B2 |
| PD-4N | for four 17B2 |
| PD-222 | for two 220B, 224WB or 225WB |
| PD-224 | for four 220B, 224WB or 225WB |




## Stacking Harnesses For Boomers

For even easier installation of our Boomers, use our installation kits that are complete with harness and power divider. Models for 17B2 have N-connectors.

| | |
|---|---|
| 617-SK | for two 617-6B's |
| 22-SK | for two 13B2's |
| 22N-SK | for two 17B2's |

One year warranty backed by our 40 years of antenna experience.

Cushcraft antennas are designed to survive 80 mph (129 kph) winds.

For safe antenna installations, avoid contact with powerlines.

The use of lightning arresters is highly recommended.

Stainless steel hardware and high grade seamless 6063-T832 tubing used in all antennas.

Support mast, feedline and RF chokes are not included with antennas.

Specifications are subject to change without notice.

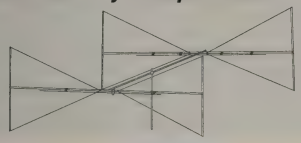
All Cushcraft antennas are available through dealers worldwide.

## BOOMER STACKING INFORMATION

| Antenna | 2x617-6B | 2x13B2 | 4x13B2 | 2x220B | 4x220B | 2x424B | 4x424B | 2x17B2 | 4x17B2 |
|---|---|---|---|---|---|---|---|---|---|
| Forward Gain, dBd | 17.0 | 18.8 | 21.8 | 19.8 | 22.4 | 20.8 | 23.4 | 21.0 | 24.0 |
| Front/Back Ratio | 30 | 24 | 24 | 30 | 30 | 30 | 30 | 24 | 24 |
| E-Plane Beamwidth,deg | 2x17.5 | 2x18 | 2x9 | 2x13 | 2x6.5 | 2x9.5 | 2x4.8 | 2x14.5 | 2x7.3 |
| H-Plane Beamwidth, deg | 2x10 | 2x9.5 | 2x9.5 | 2x7 | 2x5.5 | 2x5.5 | | 2x7.5 | 2x7.5 |
| Vert, ft | 26 | 9.2 | 9.2 | 8 | 8 | 5 | 5 | 11.5 | 11.5 |
| (m) | 7.92 | 2.8 | 2.8 | 2.44 | 2.44 | 1.97 | 1.97 | 3.5 | 3.5 |
| Horiz, ft | - | - | 9.6 | - | 8.5 | - | 5.5 | - | 12 |
| (m) | - | - | 3.0 | - | 2.59 | - | 2.16 | - | 3.7 |
| Approximate Wt, lb | 62 | 22 | 44 | 23 | 76 | 15 | 55 | 32.5 | 115 |
| (kg) | 28.12 | 10.00 | 20.00 | 10.40 | 34.40 | 7.62 | 24.95 | 14.8 | 52.3 |

# BUTTERNUT

***Makers of the famous High Performance Butternut Verticals and the HF5B "Butterfly" Compact Beam.***



## HF-5B
## 5 Band Butterfly Beam

- **5 Band Performance**
- **3 dBd gain – 20M**
- **5 dBd gain – 15/12/10M**
- **Weighs only 20 lbs**

Ideal where space is limited, the HF5B packs maximum performance onto a 6 foot boom with 12.5 foot elements.

With a windload of only 3 sq.ft, the HF5B is perfect for a lightweight mast or roof tripod. Turns easily with a TV rotator..... **$329.95**

## HF-9VX
## 9 Band Vertical

- **9 bands, 80 thru 6M**
- **No-radial operation with CPK counterpoise**
- **26 feet tall**

More efficient than the usual trapped designs or "halfwaves", Butternut's exclusive tuning system allows more of the antenna to be active on each band, providing superior overall performance on all 9 bands ..... **$269.95**

## HF-2V
## Dual Band Vertical

- **Optimized for 80 & 40M**
- **32 ft. tall - no guy wires!**
- **Adapters available for 160 or 30M**

The action is on 80 and 40 meters during the sunspot minimum - take advantage of low angle radiation with the HF2V. The entire antenna is active on both bands for maximum performance ..... **$179.95**

**WA1FFL Ladder Loc®**

Provides a means of attaching 450Ω ladderline to dipole antennas. Minimizes feedline flexing at the antenna feedpoint and ensures a long lasting, trouble-free installation. Provides an attachment point for a support rope. UV stabilized..... **$12.95**

## TECH TIP

When using balanced feed line, put some twists in the line (three twists per 10 ft.) to keep the line balanced & reduce noise pick-up!

# CENTAUR ELECTRONICS

## The "Cricket" Pulser

**CP-1** No more tuning-up key-down, creating heat and loading down the power supply! This user controlled, variable duty cycle station tuning instrument plugs into the station's exciter CW key jack. Proceed to tune-up in the usual manner, but then press the PULSE button on the CP-1 and adjust the duty-cycle control for a desired pulse width, normally about 10%. For best results the use of a peak-reading wattmeter is recommended. Uses 9-volt battery. 4¾"h x 2¼"w x 1½"d. **$67.95**

## High Performance Baluns

• State-of-the Art • 0.5 – 50MHz performance with advanced toroidal transformer • 3kW SSB rated • Extended performance in hostile environments • Stainless steel hardware • Heavy-duty body materials • Military grade internal components • 3" diameter x 7"

**B11W10–50** for 1:1 Dipole ..... **$49.95**
**B11Y10–50** for 1:1 YAGI..... **$49.95**
**B41Y10-50** for 4:1 YAGI..... **$64.95**
**B41LW10–50** 4:1, ladderline to coax.. **$64.95**

# AMERITRON

## Remote Controlled Coaxial Switches

**RCS-8V** Independently or simultaneously select up to 5 different antennas using just a single coaxial feedline and an 8-wire control cable. Internal wiring allows user to ground or float unused terminals as required. Rated to handle 5KW below 30MHz, and 1KW up to 150MHz.....**$139.95**

**RCS-4** Provides convenient selection of up to 4 different HF antennas while using just one coaxial feed line, and no additional control cable is required. The weatherproof switch box locates out on the tower, mast or other remote location. The control box locates at your operating position and switches antennas with a control voltage routed directly through the coaxial cable. Rated for 1.8–30MHz at the legal power limit..... **$129.95**

# GAMBER-JOHNSON

**SS-100** Convenient, avoid theft! Radio slides in and out of mount instantly without having to attach or remove cables. Power, Ground, Antenna, and Speaker leads connect and disconnect automatically!

*Super Slide* **Radio Mount**

RF components are designed for a low SWR up to 500MHz. Adapts to most radios; the bracket adjusts to case size and can be conveniently attached above or below the radio unit.....**$69.95**

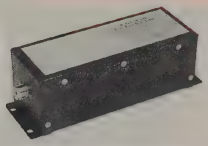
**SS-101** Extra base for multiple vehicle use. **$42.95**

# DC SALES

## "Tenna Hitch"

A heat treated, high strength aluminum bracket with an insulated 3/8" x 24 antenna mounting stud. Install under the ball of any Class-1 or 2 trailer hitch and attach the coaxial cable. Handles the largest mobile antennas, and does not interfere with trailer towing capability. No holes to drill, all hardware supplied ..... **$32.95**

# OAK BAY TECHNOLOGIES

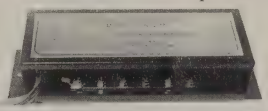


**LP-11P Commercial Grade Low Pass Filter** Installs in the transmission line between transmitter and power amplifier or tuner. Eliminates TVI by filtering out transmitter generated harmonics that could fall within the TV bands. Eleven pole Chebishev filter design covers 1.8 thru 30MHz with less than 0.5dB insertion loss, an upper cutoff frequency of 41MHz and 80dB of ultimate attenuation. Rated at 1 KW RF ..... **$69.95**

**LP-50** Low Pass Filter for 1.8 thru 54MHz .**$69.95**

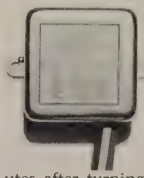
**AM-101B** Rubber Duck Window Mount

Improves handheld performance when operating mobile by getting the RF out of the car. Great for emergencies, rental cars, etc. The custom stainless steel bracket slips on the top edge of car window, and the rubber duck antenna from your HT attaches to the BNC mount on the outside. Comes with 6 ft. of RG-174U coax with BNC connector. 15W, dual/twin band compatible..... **$24.95**



**PS-612M** High Current 12V Power Strip

Make just one connection to your power source (battery, power supply, etc.) and distribute power to multiple devices. Perfect for HF radios or other high current equipment. Provides six outputs with circuit breakers; (3) rated at 30A, (3) at 20A. Rated for 50 Amps total current. Heavy duty steel housing. Comes with 4 feet of #8 gauge wire & lugs... **$64.95**



**BS-25** Automatic Battery Saver Module

Stops radio equipment from draining you car battery and prevents unauthorized use. Installs between your radio and car battery. Automatically turns on power at ignition on and removes power 4 to 8 minutes after turning ignition off. Handles up to 25 Amps draw at 14.8V DC. Rugged, plated steel enclosure, 2" x 4" x 1¼", fused power lead. ..... **$39.95**

# PAR ELECTRONICS

**OMNIANGLE Horizontally Polarized Omnidirectional Antennas**

For 6 or 2m SSB mobile & fixed station use where use of a rotor is not convenient. Outperforms traditional halo and turnstile designs. Design is considerably longer than a dipole and coupled with the unique shape, yields a horizontally polarized antenna whose pattern is within 0.8dB of being a perfect circle. Severe detuning of the antenna due to moisture has always been a been a problem for omnis, but the Omniangle, with its wide bandwidth and plastic shrouding virtually eliminates this problem. Tuning is simple and no tools are required. Power handling: 160W.

Stacking two or four of these antennas results in an omni-directional pattern, low radiation angle with gain equivalent to medium sized Yagi antennas.

**OA-144** Tuning range: 138–150MHz .....**$54.95**
**OA-50** Tuning range: 49.5–54MHz .....**$63.95**

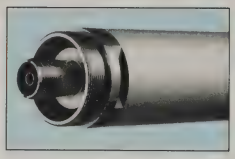
# DIAMOND ANTENNAS— THE STANDARD BY WHICH ALL OTHERS ARE JUDGED

***Acclaimed as the technological leader in single & multiband antennas***

- Wide-band Performance • Factory Adjusted—No Tuning Required • Highest Gain
- UPS Shippable • High Wind Rating • Fiberglass Radome • DC Grounded • Stainless Hardware

## X500HNA

## RUGGEDIZED BASE/REPEATER ANTENNA



COAX CONNECTION AT BASE END

HEAVY DUTY BASE/ RADIAL ASSEMBLY

STRONG JOINT COUPLINGS

147MHz

445MHz

Radiation patterns for X500HNA/X510MA/X510NA

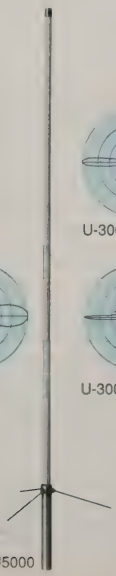
X510

U-300A 440MHz

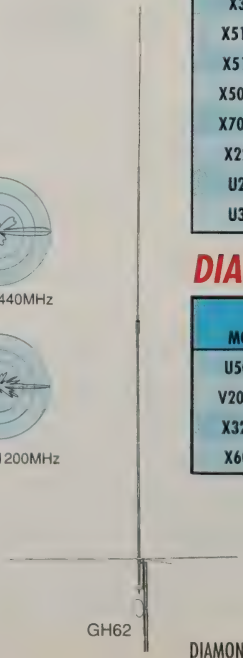
F-22

U-300A 1200MHz

F22



U5000



GH62

## DIAMOND Mono-band Base/Repeater Antennas

| MODEL | BAND (MHz) | GAIN (dBd.) | WATTS | CONN. | HT. FT. | RATED WIND MPH (No Ice) |
|---|---|---|---|---|---|---|
| DPGH62[1] | 50 | 6.0 | 200 | UHF | 21.0 | 78 |
| F22A | 144 | 6.7 | 200 | UHF | 10.5 | 112 |
| F23A | 144 | 7.8 | 200 | UHF | 15.0 | 90 |
| F142A | 222 | 5.5 | 200 | UHF | 6.0 | 110 |
| F718A[2] | 440 | 11.5 | 250 | N | 15.0 | 110 |
| F1230A | 1240 | 13.5 | 100 | N | 10.5 | 90 |

## DIAMOND Dual-Band Base/Repeater Antennas

| MODEL | BAND (MHz) | GAIN (dBd.) | WATTS | CONN. | HT. FT. | RATED WIND MPH (No Ice) |
|---|---|---|---|---|---|---|
| X50A | 144/440 | 4.5/7.2 | 200 | UHF | 5.6 | 135 |
| X200A | 144/440 | 6.0/8.0 | 200 | UHF | 8.3 | 112 |
| X300A | 144/440 | 6.5/9.0 | 200 | UHF | 10.2 | 112 |
| X510NA[3] | 144/440 | 8.3/11.7 | 200 | N | 17.2 | 90 |
| X510MA | 144/440 | 8.3/11.7 | 200 | UHF | 17.0 | 90 |
| X500HNA | 144/440 | 8.3/11.7 | 200 | N | 17.8 | 90+ |
| X700HNA | 144/440 | 9.3/13.0 | 200 | N | 24.0 | 90 |
| X2200A | 144/222 | 6.0/7.8 | 150 | UHF | 11.5 | 112 |
| U200A | 440/1240 | 8.3/11.7 | 100 | N | 5.9 | 135 |
| U300A | 440/1240 | 8.6/13.2 | 100 | N | 8.3 | 110 |

## DIAMOND Tri-Band Base/Repeater Antennas

| MODEL | BAND (MHz) | GAIN (dBd.) | WATTS | CONN. | HT. FT. | RATED WIND MPH (No Ice) |
|---|---|---|---|---|---|---|
| U5000A | 144/440/1240 | 4.5/8.3/11.7 | 100 | N | 5.9 | 135 |
| V2000A[1,4] | 50/144/440 | 2.1/6.2/8.4 | 150 | UHF | 8.3 | 110 |
| X3200A[5] | 146/222/440 | 6.0/7.8/8.0 | 100/200 | UHF | 10.5 | 112 |
| X6000A | 144/440/1240 | 6.5/9.0/10.0 | 100/100/60 | N | 10.5 | 112 |

BAND: 144=144-148MHz., 222=222-225MHz., 420=420-430MHz. 430=430-440MHz., 440=440-450MHz., 1240=1240-1300MHz.

Mast requirement: 1.4"-2.4".

[1] 50 MHz antennas are adjustable
[2] F-718A: 440-450MHz., F-718J: 430-440MHz., F718L: 420-430MHz.
[3] X510NJ: 144-147/430-440MHz.
[4] 1/4λ rated in dBi.
[5] 2m: 146-148

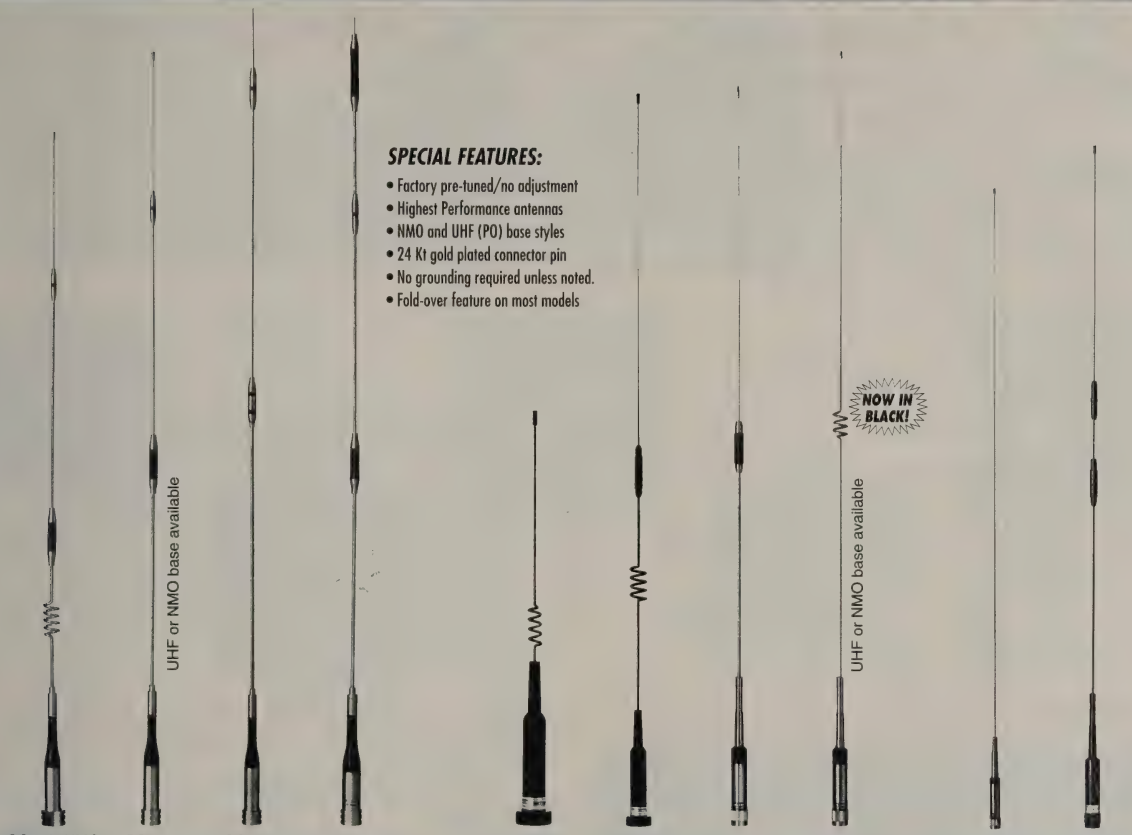
# DIAMOND'S STATE-OF-THE-ART VHF/UHF MOBILE ANTENNAS—MAXIMUM PERFORMANCE WITHOUT COMPROMISE!

## You've seen the rest...now own the BEST!

DIAMOND ANTENNA

### SPECIAL FEATURES:

- Factory pre-tuned/no adjustment
- Highest Performance antennas
- NMO and UHF (PO) base styles
- 24 Kt gold plated connector pin
- No grounding required unless noted.
- Fold-over feature on most models




SG7200NMO | SG7500 SG7500NMO | SG2000 | SG7900 | NR72BNMO | NR73BNMO | NR770R | NR770H NR770HB | CR214S | CR320A

| MODEL | BAND | GAIN (dBd.) | WATTS | CONN. | HT. IN. | ELEMENT PHASING |
|---|---|---|---|---|---|---|
| NR72BNMO[6] | 2m/70cm | 2.15 | 100 | NMO | 13.8 | 1/4λ, 1/2λ |
| NR73BNMO | 2m/70cm | 2.15/5.3 | 100 | NMO | 33.5 | 1/2λ, 1-5/8λ |
| NR770SA[6] | 2m/70cm | 2.15/2.15 | 100 | UHF | 16.9 | 1/4λ, 1/2λ |
| NR770HA[7] | 2m/70cm | 3.0/5.5 | 200 | UHF | 40.2 | 1/2λ, 2-5/8λ |
| NR770HNMO[8] | 2m/70cm | 3.0/5.5 | 200 | NMO | 38.2 | 1/2λ, 2-5/8λ |
| NR770RA | 2m/70cm | 3.0/5.5 | 200 | UHF | 38.6 | 1/2λ, 2-5/8λ |
| NR790A* | 2m/70cm | 4.5/7.2 | 120 | UHF | 57.5 | 6/8λ, 3-5/8λ |
| SG7000[6] | 2m/70cm | 2.15/3.8 | 100 | UHF | 18.5 | 1/4λ, 6/8λ |
| SG7200NMO | 2m/70cm | 3.2/5.7 | 150 | NMO | 36.6 | 1/2λ, 2-5/8λ |
| SG7500A | 2m/70cm | 3.5/6.0 | 150 | UHF | 40.6 | 1/2λ, 2-5/8λ |
| SG7500NMO | 2m/70cm | 3.5/6.0 | 150 | NMO | 41.0 | 1/2λ, 2-5/8λ |

1/4λ antennas rated in dBi.

| MODEL | BAND | GAIN (dBd.) | WATTS | CONN. | HT. IN. | ELEMENT PHASING |
|---|---|---|---|---|---|---|
| SG7900* | 2m/70cm | 5.0/7.6 | 150 | UHF | 62.2 | 7/8λ, 3-5/8λ |
| SG2000* | 2m | 5.2 | 150 | UHF | 62.6 | 7/8λ |
| SG6000NMO[6,9] | 6m | 2.1 | 150 | NMO | 39 | 1/4λ |
| NR140A | 1-1/4m | 3.8 | 100 | UHF | 36.2 | 5/8λ |
| NR124 | 23cm | 8.4 | 100 | N | 25 | 4-5/8λ |
| CR214S[6] | 2m/1-1/4m | 2.15/3.4 | 120 | UHF | 37 | 1/2λ, 5/8λ |
| CR224A*[6] | 2m/1-1/4m | 5.0/6.0 | 150 | UHF | 68.5 | 7/8λ, 2-5/8λ |
| CR320A[6] | 2m/1-1/4m/ 70cm | 2.15/3.8/ 5.5 | 200/ 200/100 | UHF | 37.4 | 1/4λ, 1/2λ, 2-5/8λ |
| CR627B[6,9] CR627BNMO[6,9] | 6m/2m/ 70cm | 2.1/4.5/ 5.5 | 120 200/100 | UHF NMO | 60 | 1/4λ, 1/2+1/4λ/ 2-5/8λ |
| NR2000NA | 2m/70cm/ 23cm | 3.15/6.3/ 9.7 | 100 | N | 39 | 1/2λ, 2-5/8λ 5-5/8λ |

* Not recommended for Magnet Mount
[6] Grounding required.
[7] NR770HB same specifications but in black finish.
[8] NR770HBNMO same specifications but in black finish.
[9] 50MHz antennas adjustable

### FOLD-OVER

Patented One-Touch Fold-over Feature
(Not available on NR72BNMO, NR73BNMO or NR770SA.)

# NEW IDEAS FROM DIAMOND
# HF/VHF MULTIBAND MOBILE ANTENNAS
# HIGH EFFICIENCY HT & SCANNER ANTENNAS

DIAMOND ANTENNA

NEW!

## DIAMOND MV3A MOBILE ANTENNA SYSTEM

***For New HF/VHF transceivers.***

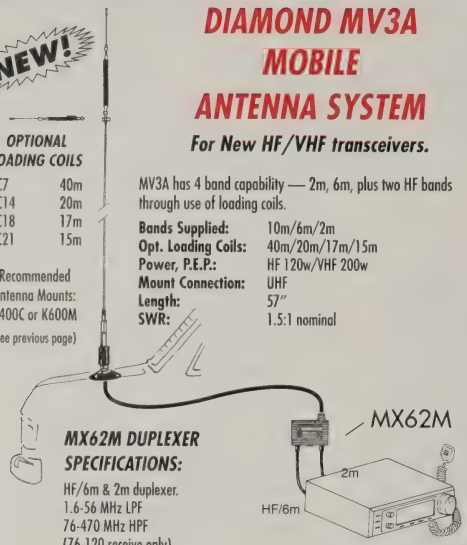
**OPTIONAL LOADING COILS**

| | |
|---|---|
| HVC7 | 40m |
| HVC14 | 20m |
| HVC18 | 17m |
| HVC21 | 15m |

Recommended Antenna Mounts: K400C or K600M (see previous page)

MV3A has 4 band capability — 2m, 6m, plus two HF bands through use of loading coils.

| | |
|---|---|
| **Bands Supplied:** | 10m/6m/2m |
| **Opt. Loading Coils:** | 40m/20m/17m/15m |
| **Power, P.E.P.:** | HF 120w/VHF 200w |
| **Mount Connection:** | UHF |
| **Length:** | 57″ |
| **SWR:** | 1.5:1 nominal |




***MX62M DUPLEXER SPECIFICATIONS:***

HF/6m & 2m duplexer.
1.6-56 MHz LPF
76-470 MHz HPF
(76-120 receive only)

| | |
|---|---|
| **Watts:** | 600 P.E.P. |
| **Loss:** | .2 dB LPF |
| | .3 dB HPF |
| **Isol.:** | 50 dB |

Popular HF/VHF Mobile Transceivers; i.e. IC706, etc. (Or combine your 2m & HF)

## DIAMOND D130J Discone

The D130J Super Discone Antenna is an ultra-wideband antenna covering amateur radio, air traffic control and other various utility frequency bands. Rust-free stainless steel is employed in major component parts making the antenna rust resistant and durable.

### DESCRIPTION

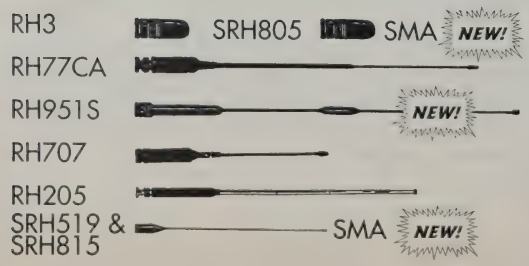
- Ultra-wideband design 25 to 1300 MHz receive.
- Compact and lightweight design enables the antenna to be installed on balcony railing at an apartment or condominium.
- Transmit on 2 m, 1 1/4 m, 70 cm, 33 cm and 23 cm amateur bands.
- The D130J can be made further compact and lightweight by removing the top loading coil if 25-50 MHz is not required.

### SPECIFICATIONS

| | |
|---|---|
| **Frequency range** | 25 to 1300MHz receive<br>100 to 1300 MHz transmit |
| **Length** | 1.7 m (66.9″) |
| **Weight** | 1 kg (2.2 lbs.) |
| **Max. length** | 0.41 m (16.1″) |
| **Mast diameter** | 25 to 52 mm (0.98″ to 2.05″)<br>with supplied mounting brackets |
| **Max. power** | 200 w, 100-1300 MHz |

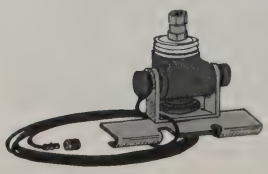
## DIAMOND Receiving/Scanner Antennas

| MODEL | DESCRIPTION | RELATIVE GAIN |
|---|---|---|
| D130J | Wideband discone 25-1300 MHz. 200 W transmit 50-1300 MHz. No cable. | N/A |
| **RH3** | 2m/70cm dual band "Black Bullet" HT antenna. 1.75″ BNC. 120 to 900 receive. | -2 dB |
| **RH77CA** | High gain 2m/70cm dual band HT antenna. Receive range to 900 MHz. BNC | +6 dB |
| RH205 | 2m HT antenna, telescopic, 5/8 fully extended, 47.5″; 1/4 retracted, 9″ | +9 dB |
| RH519 | 2m/70cm slim dual-band HT antenna. Flexible. 8″ BNC, 10 watts. | +3 dB |
| **RH707** | 2m/70cm dual band - tiltable whip - HT antenna. 8 1/4″ BNC. | +3 dB |
| **RH951S** | High gain 2m/70cm/23cm slim tri-band HT antenna. Flexible. BNC (Wide band receive) | +6 dB |
| **SRH519** | 2m/70cm/23cm dual-band HT antenna. Flexible. 8″ SMA, 10 watts. | +3 dB |
| **SRH805** | 2m/70cm/23cm tri-band HT antenna. 1.75″ SMA, 10 watts. | -2 dB |
| **SRH815** | 2m/70cm/23cm tri-band HT antenna. Flexible. 6″ SMA, 10 watts. | +3 dB |




| MODEL | DESCRIPTION |
|---|---|
| **CX-210A** | Heavy duty wideband coax switch, DC-1000 MHz. 1.5 kW, SO-239 |
| **CX-210N** | Heavy duty wideband coax switch, DC-1500 MHz. 1.5 kW, Type N |
| **DL-30A** | Dummy load, DC-500 MHz. 15w average/100w peak. PL-259 |

### Special Trunk Mount for 3/8x24 thread Antennas



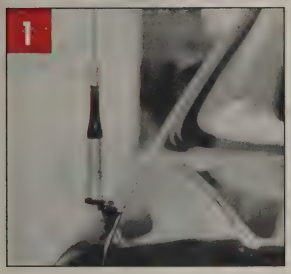
Ideal mount for Outbacker Perth, OB Jr., and other medium weight antennas.

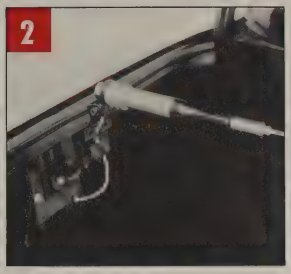
*Note:* use C110, 10 ft extension for front radio installation.

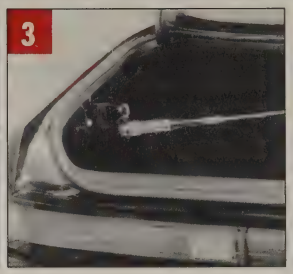
**Adjustment:** 2 axis
**Power:** 350 watts RMS 500 w P.E.P.
**Cable:** 6 1/2′ RG316 teflon coax w/PL-259
Spring recommended for stiff/heavy antennas.

# PREMIUM GRADE ANTENNA MOUNTS AND DUPLEXERS/TRIPLEXERS BY DIAMOND

## Designed for today's high performance antennas




### DIAMOND'S NEW HIDE-AWAY ANTENNA MOUNT

As easy as 1, 2, 3—the new K601 Hide-away Mount folds antenna safely into the trunk. Fully adjustable, fits most vehicles.

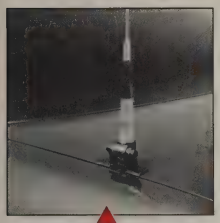
Color: Black. Choice of NMO or UHF base.

Recommended antennas: NR73BMNO, NR770HNMO, NR770HBNMO, SG7200NMO, NR770HA, NR770HB, NR770RA, SG7500A & SG7500NMO.

Cable: 6.5' RG316 Teflon coax & PL-259

**K601M**—UHF Base **K601NMO**—NMO Base

**C110,** 10' extension cable for front radio installations



### K400 HATCHBACK/DOOR/TRUNK LID MOUNT

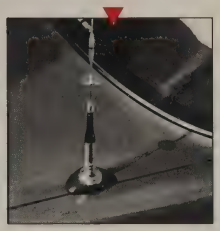
Diamond's deluxe heavy duty mount. Two-axis adjustable. Recommended for high gain VHF/UHF antennas.

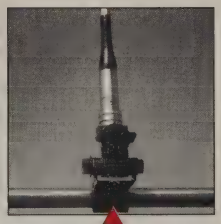
**K400C*** SO-239 base, 6.5' coax & PL-259
**K400CNMO*** NMO base, 6.5' coax & PL-259
**K400N** Type-N base, 13.5' coax & PL-259
*Use C110, for front radio installations.

### K600 VARIABLE ANGLE TRUNK MOUNT

Deluxe aerodynamic trunk mount. Vertical adjustment range 0-9%. Four set screw, stainless steel mount assembly.

**K600M** SO-239 base, 16.5' coax & PL-259
**K600P** SO-239 base, 16.5' coax & type N





### K540 MIRROR/LUGGAGE RACK MOUNT

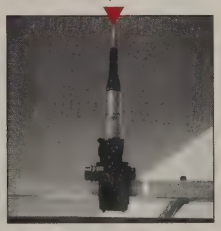
Adjustable Mirror/luggage rack mount accepts 1/2" to 7/8" tubing. Fits most mirrors and utility racks.

**K540KM** SO-239 base, 16.5' coax & PL-259
**K540** Mount Only

### K550 LUGGAGE RACK MOUNT

Adjustable luggage rack mount for new mini-vans.

**K550KM** SO-239 base, 16.5' coax & PL-259
**K550** Mount Only



### PREMIUM MAGNET MOUNT BASE

Heavy duty 2.2 lb./4" magnet mount. Rated 25-500MHz. Recommended for antennas under 45".

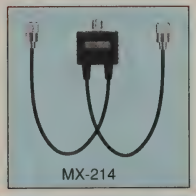
**SPM-3S** SO-239 base, 13' coax & PL-259
**DP-SPM/58U** SO-239 base, 13' coax & PL-259
**DPK-4NM-M** SO-239 base, 13' coax & type-N
**DPK-4NM-N** Type- N base, 13' coax & Type-N

## DUPLEXERS AND TRIPLEXERS FOR COMBINING AND SPLITTING VHF/UHF FREQUENCIES

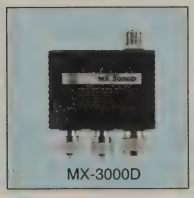
• Lowest loss • Maximum Band Isolation • Low VSWR

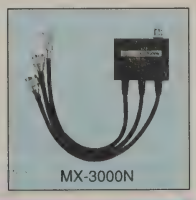
MX-72D/DN

MX-72H/N


MX-214

MX-324/MX2000


MX-3000D


MX-3000N

| MODEL | MX37 | MX72D | MX72DN | MX72H | MX72N | MX72J | MX214 | MX214D | MX324 | MX324D | MX2000 | MX2000D | MX3000 | MX3000N | MX3000D | MX62M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FREQUENCY BAND (MHz) | 1.6-470<br>900-1300 | LPF<br>1.6-30 | | 140-150 | HPF<br>400-460 | | 140-150<br>220-225 | | LPF<br>1.5-150 | BPF<br>220-225 | HPF<br>400-550 | LPF<br>1.6-60 | BPF<br>110-170 | HPF<br>300-950 | LPF<br>1.6-160 | BPF<br>350-500 | HPF<br>850-1300 | LPF<br>1.6-56 | HPF<br>76-470 |
| PWR CW (ICAS) | 100/50 | 400 | | 150 | 100 | 400 | 150/100 | | | | | | | | 400 | 200 | 100 | 600 | 600 |
| WATTS P.E.P. | 200/100 | 1000 | | 400 | 250 | 800 | 300/200 | | 800 | 600 | 500 | 800 | 800 | 500 | 800 | 400 | 200 | | |
| THRU LOSS/dB | 0.25/0.45 | 0.15 | | 0.15 | 0.25 | | 0.3/0.4 | | 0.3 | 0.4 | 0.4 | 0.15 | 0.2 | 0.25 | 0.2 | 0.3 | 0.4 | 0.2 | 0.3 |
| ISOL | 45dB | 60dB | | | | | 45dB | | 40-50dB | | | 60dB | | | 55dB | | | 50db | |
| VSWR | 1.2:1 | 1.2:1 | | | | | 1.2:1 | | 1.2:1 | | | 1.2:1 | | | 1.2:1 | | | 1.2:1 | |
| CONNECTOR COMPLEMENT | (N) MIX 430 1200 (M) (N) | (M) MIX 144 430 (M) (M) | (N) MIX 144 430 (M) (N) | (N) MIX 144 430 (M) (M) | (M) MIX 144 430 (M) (N) | (M) MIX 144 430 (M) (M) | (M) MIX 144 220 (M) (M) | (M) MIX 144 220 (M) (M) | (M) MIX 144 220 430 (M) (M) (M) | (M) MIX 144 220 430 (M) (M) (M) | (M) MIX 50 144 430 (M) (M) (M) | (M) MIX 50 144 430 (M) (M) (M) | (N) MIX 144 430 1200 (M) (M) (N) | (N) MIX 144 430 1200 (M) (M) (N) | (N) MIX 144 430 1200 (M) (M) (N) | (M) MIX HF/6M 2M (M) (M) |
| CONNECTOR | 12" Cable w/ Connectors | Direct | | 12" Cable w/Connectors | | Direct all SO-239 | 12" Cable w/Connectors | Direct | 12"Cable w/Connectors | Direct | 12" Cable w/Connectors | Direct | 12" Cable w/Connectors | | Direct | 12" Cable w/Connectors |

NOTE: Connectors shown as "M" are low loss equivalent of SO-239 & PL-259. Connectors shown as "N" are standard Type-N.

# Maldol

The Innovative Antenna Company

## THE ARD & VM SERIES – DUAL & MONOBAND ANTENNAS

Meet the hottest new line of Dual & Monoband mobile antennas – Maldol's ARD & VM series. Known a for style & performance that extends the range of any mobile rig. Pretuned, broadbanded & weatherproofed.

**DUAL BAND** (144/430MHz)

| Model | Length | Gain (dbd) | Power | Color |
|---|---|---|---|---|
| ARD5B | 19.3" | 0/ 3.8 | 120W | Black |
| ARD6/6B | 26.5" | 2.6 / 4.9 | 120W | Black/Chrome |
| ARD 10/10B | 34.4" | 3.0 / 5.5 | 120W | Black/Chrome |
| ARD 12/12B | 48.2" | 4.3 / 6.8 | 150W | Black/Chrome |
| ARD 16/16B | 64.8" | 5.0 / 7.7 | 150W | Black/Chrome |
| VM727HP | 36.4" | 3.0 / 5.5 | 300W | Chrome |
| VM727CR | 41.6" | 3.8 / 6.2 | 150W | Chrome |
| VM727E | 58.6" | 4.5/7.2 | 150W | Chrome |
| VM727RE | 59.4" | 4.5/7.2 | 150W | Chrome |
| **MONO BAND** | | | | |
| ARS50 (50MHz) | 61.2" | 1/4 Wave | 100W | Chrome |
| ARS146 (146MHz) | 56.0" | 4.1 | 150W | Black/Chrome |
| VM2HP | 43.2" | 3.0 | 300W | Chrome |
| VM144HP | 71.6" | 4.5 | 200W | Chrome |
| ARS440 (440MHz) | 38.4" | 5.5 | 150W | Black/Chrome |

## THE WORLD CLASS IN HT ANTENNAS

Acknowledged as the world standard for quality & performance. Maldol continues to outperform and out-sell all competition at a lower price.

| | | | |
|---|---|---|---|
| AH209S | Soft Duck–Dual Band | 25W | Black |
| HS702S | 17.6" Whip (0/3.2dbd) | 25W | Black |

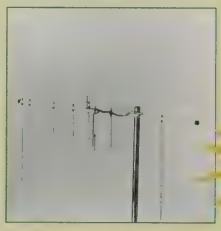
## MOTORIZED TILT-OVER MOBILE MOUNT

The mobileer's dream! Ideal mate for ARDs and EXs but also works great for other antennas up to 65" long. Neat motorized unit quick-installs on hatchback or roof rack. Remote up/down switch fits under dash.One-touch tilting for low overhangs & garages.

MK30 Power Mount–Handles antennas up to 65" long & 1lb
RG4M Matching Cable & Connector–UHF

## FOX 727 DUAL BAND PORTABLE/BASE YAGI

All stainless hardware with lightweight aluminum boom. The unit comes in its own carrying pouch for easy transport. Covers both 144 & 430MHz bands; Gain 9.5/11.5 db; rated 100 watts



## INTERNATIONAL ANTENNAS Double Bazooka Antennas

Double Bazooka 1/2-wave antennas are constructed with a flat-top of 50Ω coax and a section of open-wire line at each end. The shield is split in the middle, but the center conductor and insulation are left intact. The feedline connects to the split shield which becomes the radiating element. This results in extremely quiet, broadband operation with 98% efficiency and a 50Ω feedpoint that feeds directly without a balun. Mounts horizontally or as an inverted V with low SWR across the entire band. Handles the legal limit. Weatherproof center insulator with coax connector. The 80 meter version will operate efficiently on all bands with a tuner.

**IAC80M** Bazooka, 3.5 MHz (75-80M), 124 ft...**$135.95**
**IAC40M** Bazooka, 7 MHz 40M), 64 ft. long.....**$115.95**

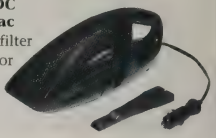
## AES Accessories

**AES SC189 Portable Rechargeable Camping Light**
- Two 6W fluorescent lamps
- Built-in flashlight
- Built-in heavy duty rechargeable battery
- Low battery indicator

**$59.95**

**AES SC192 Portable Multi-function Work Light**
- 12V DC, On/Off switch
- Powerful magnetic mount
- Built-in tripod stand with adjustable tilt

**$19.95**



**AES SC193 12 Volt DC High-Powered Car Vac**
- Removable, washable filter
- Includes crevice tool for accessing tight areas
- 10 ft. car cord
- High powered motor

**$19.95**

**AES SC702 Cordless Rechargeable Spotlight**
- 500,000 candle power beam
- Built-in NiCad rechargeable battery pack
- Unique On/Off locking trigger switch prevents battery run down when not in use
- Charge by car battery or AC adapter
- Provides up to 30 min. of continuous operation

**$39.95**

**AES SC7848 12V Portable Handheld Spotlight with Tripod**
- Quartz halogen; 8" reflector–1,000,000 candle power
- 8 ft. cord with lighter plug
- High-impact ABS handle conceals foldable tripod for emergency use.

**$34.95**

**AES SC784 – $24.95**
- Same as above, but 5" reflector – 400,000 candle power

More AES Accessories on page 30

*New!*

## DELORME *Tripmate* Satellite Navigator

**Never Get Lost Again!**

Tripmate is a high-performance, easy-to-use link to the satellite navigation technology of the Global Positioning System (GPS). Tripmate and a portable PC will show your location on a detailed Street Atlas USA 4.0 maps–anywhere in the United States! An arrow shows your position on the map and moves as you travel.

**Drive with Confidence!**

Tripmate will track your location anywhere in the U.S., even where some other high-end receivers might let you down. It's perfect for anyone on the go with a portable PC, including mobile salespeople, truckers or families with RVs.

**Easy to Use!**

If your portable PC has a CD-ROM drive, plug Tripmate into the serial port. If not, use a desktop PC to select the area of interest and download it to your portable ..... **DEL TRIPMATE $149.95**

# KLM TRIBANDERS

The KT-34A and KT-34XA have become pace-setters for tribander performance. The four element KT-34A offers an unusually compact solution for a three-band high performance installation. The six element KT-34XA has been designed to outperform all commercially available tribanders and many monobanders as well. The high performance of these tribanders results from their innovative construction. Traps, coils, and capacitors found on conventional tribanders are replaced by lossless linear loading and high-Q air capacitors constructed of aluminum tubing. These techniques coupled with *KLM's* unique dual-driven element system allow broadband performance with high gain and low VSWR remaining nearly constant across the three bands. The KT-34A can be upgraded to the KT-34XA at any time.

The boom length of the KT-34XA is doubled, when one tri-resonant and one full size 10 meter element is added. These changes increase the gain to 11-11.3 dBd on 10M, 9-9.5 dBd on 15M, and 8.5-9 dBd on 20M.

Structurally, the KT-34A is built tough. All the aluminum, including the boom, is strong weather resistant 6063-T832 alloy. All the hardware is stainless steel except for the mounting U-bolts. Virtually indestructible Lexan insulators support the elements and insulate them from the boom. Rotation is possible by most any ham rotor. Wind balance and wind survival are excellent.

## KT-34A

### SPECIFICATIONS

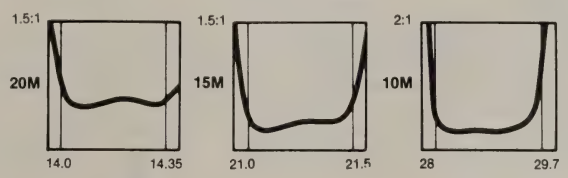
**ELECTRICAL**

| | |
|---|---|
| BANDWIDTH | 14.0-14.350 MHz |
| | 21.0-21.450 MHz |
| | 28-29.7 MHz |
| GAIN | 7 dBd ± 0.3 dB |
| VSWR | 1.5:1 |
| F/B-F/S | 20 dB/30 dB |
| FEED IMP | 50 Ohms w/Balun |
| BALUN | 4:1, 5 kW PEP |

**MECHANICAL**

| | |
|---|---|
| ELEMENT LENGTH | 24 ft. |
| BOOM LENGTH | 16 ft. |
| TURN RADIUS | 16 ft. |
| WINDLOAD | 6 sq. ft. |
| WEIGHT | 45 lbs. |
| MAST | 2 in. O.D. |

**KT34A vs. SWR**




## KT-34XA

### SPECIFICATIONS

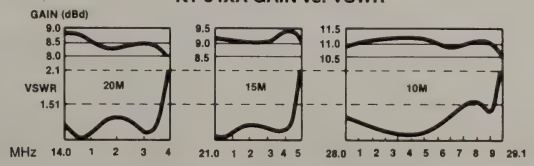
**ELECTRICAL**

| | |
|---|---|
| BANDWIDTH | 14.0-14.350 MHz |
| | 21.0-21.450 MHz |
| | 28-29.1 MHz |
| GAIN | 8.5-9 dB |
| | 9-9.5 dB |
| | 11-11.3 dB |
| VSWR | 1.5:1 |
| F/B-F/S | 20 dB/40 dB |
| FEED IMP | 50 Ohms w/Balun |
| BALUN | 4:1, 5 kW PEP |

**MECHANICAL**

| | |
|---|---|
| ELEMENT LENGTH | 24 ft. |
| BOOM LENGTH | 32 ft. |
| TURN RADIUS | 21.5 ft. |
| WINDLOAD | 9 sq. ft. |
| WEIGHT | 68 lbs. |
| MAST | 2 in. O.D. |

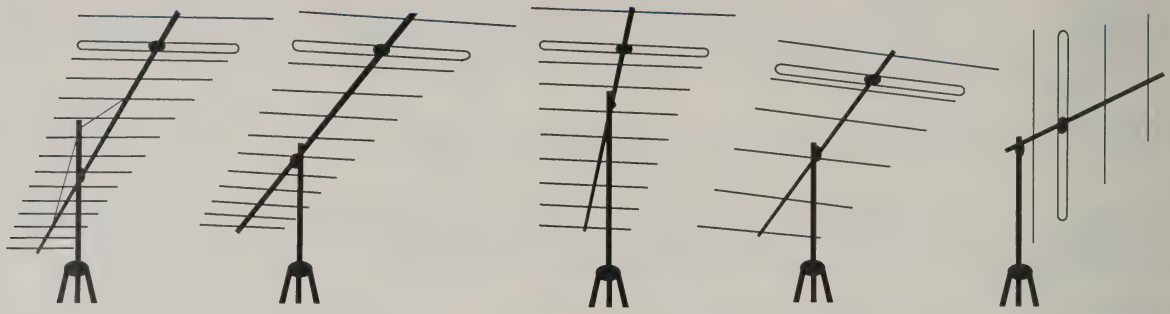
**KT-34XA GAIN vs. VSWR**



# KLM VHF-UHF ANTENNAS

## 2 METER YAGIS

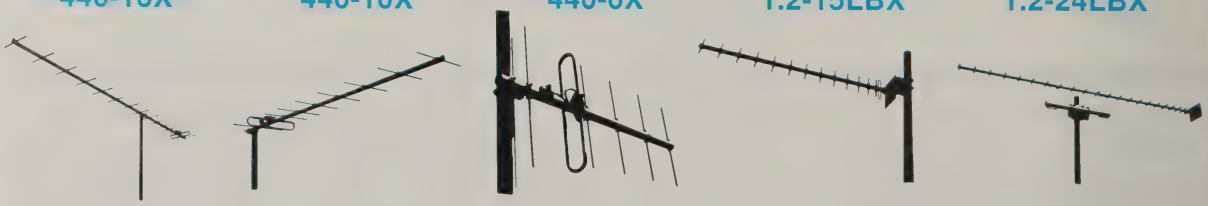
2M-15X 2M-12X 2M-10X 2M-7X 2M-4X



## 2 METERS

| | 2M-20 LBX | 2M-15X *new for '96* | 2M-12X *new for '96* | 2M-10 X *new for '96* | 2M-7X *new for '96* | 2M-4 X |
|---|---|---|---|---|---|---|
| **ELECTRICAL:** | | | | | | |
| BANDWIDTH | SPEC. 144-146 USABLE 143-148 144-15.5 dBd | 144-148 MHz | 144-148 MHz | 144-148 MHz | 144-148 MHz | 144-148 MHz |
| GAIN | 145-15.5 dBd 146-15.4 dBd 147-15.3 dBd 148-13.7 dB | 14.8 dBd | 13.4 dBd | 12.5 dBd | 10.3 dBd | 8.5 dBd |
| VSWR.....Less than | 1.5:1 | 1.5:1 | 1.5:1 | 1.5:1 | 1.5:1 | 1.5:1 |
| F/B.....Greater than | 30 dB | 30 dB | 25 dB | 25 dB | 25 dB | 20 dB |
| BEAMWIDTH | E=26°, H=28° | E=26°, H=29° | E=28°, H=33° | E=32°, H=36° | E=46°, H=50° | 62° |
| FEED IMP | 50 Ohms | 50 Ohms | 50 Ohms | 50 Ohms | 50 Ohms | 50 Ohms |
| BALUN | 4:1, 2 kW Coax | 4:1, 2 kW Coax | 4:1, 2 kW Coax | 4:1, 2 kW Coax | 4:1 2 kW Coax | 4:1, 2 kW Coax |
| **MECHANICAL:** | | | | | | |
| ELEMENT LENGTH | 40 5/8 in. | 40 5/8 in. | 40 5/8 in. | 40 5/8 in. | 40 5/8 in. | 40 5/8 in. |
| BOOM LENGTH | 38.5 ft. | 28 ft. | 21 ft. | 15 ft. | 8 ft. 9 in. | 4.2 ft. |
| TURN RADIUS | 21 ft. 10 in. | 15 ft. 5 in. | 13 ft. | 8 ft. 9 in. | 5 ft. | 4 ft. |
| WINDLOAD | 2.19 sq. ft. | 1.75 sq. ft. | 1.6 sq. ft. | 1.38 sq. ft. | .65 sq. ft. | .25 sq. ft. |
| WEIGHT | 17 lbs. | 11 lbs. | 9 lbs. | 6 lbs. | 4 lbs. | 2 lbs. |
| MAST | 2 in. | 1 1/2 in. or 2 in. | 1 1/2 in. or 2 in. | 1 1/2 in. or 2 in. | 1 1/2 in. or 2 in. | 1 1/2 in. max. |

440-16X 440-10X 440-6X 1.2-15LBX 1.2-24LBX



## 440 MHz — 432 MHz — 1296 MHz

| | 440-16X | 440-10X | 440-6X | 432-30 LBX | 432-20 LBX | 1.2-44 LBX | 1.2-24 LBX | 1.2-15 LBX |
|---|---|---|---|---|---|---|---|---|
| **ELECTRICAL:** | | | | | | | | |
| BANDWIDTH | 420-450 MHz | 420-470 MHz | 420-470 MHz | 430-440 MHz | 425-440 MHz | 1260-1300 MHz | 1260-1300 MHz | 1260-1300 MHz |
| GAIN | 14.0 dBd | 11.5 dBd | 8.9 dBd | 17.3 dBd | 15.3 dBd | 18.2 dBd | 16.2 dBd | 13.6 dBd |
| VSWR.....Less than | 1.5:1 | 1.5:1 | 1.5:1 | 1.5:1 | 1.5:1 | 1.5:1 | 1.5:1 | 1.5:1 |
| F/B.....Greater than | 20 dB | 20 dB | 20 dB | 20 dB | 20 dB | 39 dB | 39 dB | 39 dB |
| FEED IMPEDANCE | 50 Ohms | 50 Ohms | 50 Ohms | 50 Ohms | 50 Ohms | 50 Ohms | 50 Ohms | 50 Ohms |
| BALUN | Coax "N" 4:1, 2 kW | Coax "N" 4:1, 2 kW | Coax "N" 4:1 2 kW | 1:1 Sleeve, 2 kW | 1:1 Sleeve, 2 kW | 4:1 Rigid Coax | 4:1 Rigid Coax | 4:1 Rigid Coax |
| BEAMWIDTH | E=28°, H=32° | 48° | 60° | | | E=16°, H=18° | E=22°, H=24° | E=28°, H=30° |
| **MECHANICAL:** | | | | | | | | |
| ELEMENT LENGTH | 14 in. max. | 14 in. max. | 14 in. max. | 14 in. max. | 14 in. max. | 4.5 in. | 4.5 in. | 4.5 in. |
| BOOM LENGTH | 10 ft. 3 in. | 4.75 ft. | 28 in. | 21 ft. 11 in. (9.6 wavelength) | 12 ft. 4 in. (5.42 wavelength) | 12 ft. 4 in. | 75 3/4 in. | 42 in. |
| TURN RADIUS | 6 ft. | 4.90 ft. | 2 ft. 5 in. | 12 ft. 4 in. | 7 ft. | 84 in. | 38 in. | 43 in. |
| WINDLOAD | 0.74 sq. ft. | 0.53 sq. ft. | 0.2 sq. ft. | 1.72 sq. ft. | 0.9 sq. ft. | 1 sq. ft. | 1/2 sq. ft. | 1/4 sq. ft. |
| WEIGHT | 7.5 lbs. | 4 lbs. | 1.2 lbs. | 9 lbs. | 5 lbs. | 10 lbs. | 7 lbs. | 4 lbs. |
| MAST | 1 1/2 in. | 1 1/2 in. | 1/12 in. | 2 1/8 in. max. | 1 1/2 in. | 2 in. O.D. | up to 2 in. O.D. | up to 2 in O.D. |
| MOUNT | Center | Rear | Rear | Center | Center | Center | Center | Rear |

# KLM SATELLITE CIRCULARS - VHF/UHF

| ELECTRICAL: | 2M-14C | 2M-22C | 435-18C | 435-40CX |
|---|---|---|---|---|
| BANDWIDTH | 144-150 MHz | 144-150 MHz | 420-450 MHz | 420-450 MHz |
| GAIN | 11 dBc | 13 dBc | 12 dBc | 15.2 dBc |
| VSWR Less than | 1.5:1 | 1.5:1 | 1.5:1 | 1.5:1 |
| F/B Greater than | 20 dB | 20 dB | 20 dB | 20 dB |
| FEED IMP | 50 Ohms | 50 Ohms | 50 Ohms | 50 Ohms |
| BEAMWIDTH | 38° | 34° | 34° | 25° |
| ELLIPTICITY | 3 dB max | 3 dB max | 3 dB max | 3 dB max |
| BALUN | (2) 4:1 coax, 2 kW* | (2) 4:1 Coax, 2 kW* | (2) 4:1 Coax, 2 kW* | (2) 4:1 Coax, 2 kW* |
| **MECHANICAL:** | | | | |
| ELEMENT LENGTH | 40.625 in. max | 40.625 in. max | 13.25 in. max | 13.625 in. max |
| BOOM LENGTH | 12 ft. 9 in. | 19 ft. 1 in. | 7 ft. 4 in. | 14 ft. 7 in. |
| TURN RADIUS | 7 ft. | 11 ft. | 7 ft. | 8 ft., 9 in. |
| WINDLOAD | 1.25 sq. ft. | 1.85 sq. ft. | 0.5 sq. ft. | 1.16 sq. ft. |
| WEIGHT | 7.5 lbs. | 11 lbs. | 4.5 lbs. | 10 lbs. |
| MAST | 2 in. | 2 in. | 1.5 in. | 1.5 in. |
| MOUNT | Center | Center | Rear | Center |
| POLARITY | Circular R.H. and L.H. switchable using CS-3 | Circular R.H. and L.H. switchable using CS-2 | | |

*Derate to 250W when using Switchers (supplied)

435-40CX

## HF LOG PERIODICS

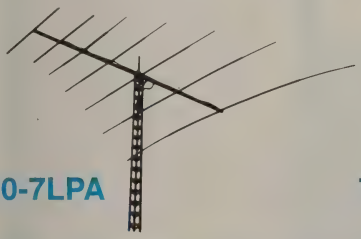
***KLM's*** Log Periodic Antennas offer extended coverage of the amateur bands and intermediate frequencies. The **10-30-7LPA** for example, covers 20, 15, and 10 Meters plus the WARC bands and many MARS frequencies. The addition of the **40M-1** dipole module provides 40 Meter operation as well. This can easily be accomplished using the **SK-8** Conversion Kit. This system is also available complete as the **7.2/10-30-LPA.** All HF Log Periodic Antennas are available with a Heavy Duty Boom at additional cost. Also, 10kW Baluns are available for a nominal charge.

| ELECTRICAL: | 10-30-7LPA | 7.2/10-30LPA | 6-30-15LPA |
|---|---|---|---|
| BANDWIDTH | 10-30 MHz | 7.2/10-30 MHz | 6-30 MHz |
| GAIN | 7 dBd typ | 3/7 dBd typ | 5.5 to 8 dBd |
| VSWR | 1.5:1 typ | 1.5:1 typ | 2:1 and less, typ |
| F/B | 15 dB | 10/15 dB | 15 dB typ |
| FEED IMP | 50 Ohms, unbal. | 50 Ohms, unbal. | 50 Ohms, unbal. |
| BALUN(S) | 4:1, 5 kW | 4:1, 5 kW | (3) 4:1, 4 kW PEP |
| **MECHANICAL:** | | | |
| ELEMENTS | 7 | 8 | 1.5 |
| ELEMENT LENGTH | 43 ft. | 46 ft. | 48 ft. |
| BOOM LENGTH | 30 ft. | 42 ft. | 46 ft. (6-12-8) |
| TURN RADIUS | 26 ft. | 32 ft. | 30 ft. (10-30-7) |
| WINDLOAD | 8.25 sq. ft. | 12 sq. ft. | 24 sq. ft. |
| WEIGHT | 70 lbs. | 100 lbs. | 150 lbs. (6-12-80) / 70 lbs. (10-30-7) |
| MAST | 2 in. | 2 in. | 2 in./3 in. |

### SK-8 Conversion Kit

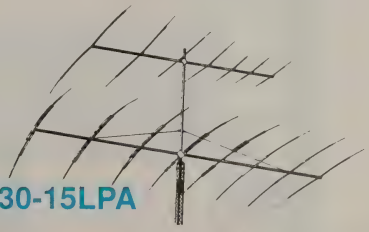
This kit enables you to add 40 Meters to your *KLM* 10-30-7LPA antenna. The SK8 kit includes a boom extension, a beta match for the dipole and all the necessary hardware including a full set of instructions. Purchase a *KLM* 40M Dipole to finish the upgrade.

By upgrading your present 10-30-7LPA to include 40M you will enjoy increased Front-to-Back on 20M and will see Front-to-Back gain on 40M similar to a 2 element beam. You will also enjoy forward gain on 40 Meters through the interaction of the full log array. It's an easy way to upgrade your log.



10-30-7LPA

7.2/10-30LPA



6-30-15LPA

**ORDER TOLL FREE: 1-800-558-0411** *Our 40th Anniversary!*

# AMATEUR ELECTRONIC SUPPLY® INC.

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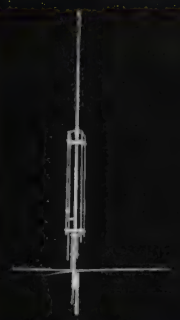
**40 YEARS IN AMATEUR RADIO!**

# GAP: The Perfect Antenna

We at GAP realize there isn't a perfect antenna. No singular antenna will scream DX on 80 and be the best for local nets on 10. If anyone tells you there is, beware! The perfect antenna does not exist, but the right one for you may. If you want something to bust the pile on the low bands, then consider the Voyager. Just starting out in ham radio and need a great general coverage antenna, the Challenger is easy to assemble and for little effort will yield superior performance, especially on DX. Maybe you knowingly or unknowingly moved into one of those "restricted areas" where the Eagle's limited visibility, but unlimited ability is desired.



Eagle DX

Challenger DX

Voyager DX

This chart helps you select the right GAP antenna. When comparing GAPs, bandwidth is not a concern. With few exceptions, a GAP yields continuous coverage under 2:1 for the **ENTIRE BAND**.

All antennas utilize a GAP elevated asymmetric feed. A major benefit is the virtual elimination of the earth loss, so more RF radiates into the air instead of the ground. This feed is why a GAP requires **NO RADIALS**. Just as elevating a GAP offers no significant improvement to its performance, adding radials won't either, making set up a breeze.

**A GAP antenna has no traps, coils or transformers.** This is important. The greatest sources of failure in multiband antennas are these devices. Perhaps you heard someone discuss a trap that had melted, arced or became full of water. Improvements to these inherent problems are the focus of the antenna manufacturer, while the basic design of the antenna remains unchanged. **GAP improved the trap by eliminating it!** Removing these devices means they don't have to be tuned and, more importantly, won't be detuned by the first ice or rain. The absence of these devices improves antenna reliability, stability and increases bandwidth.

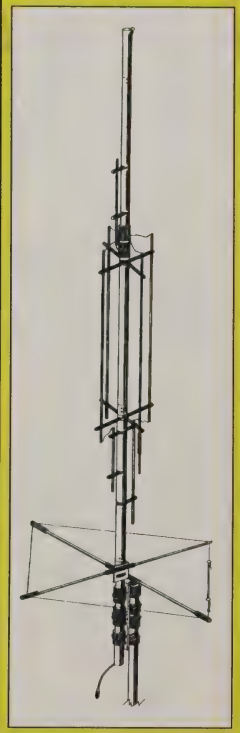
Another major advantage to a GAP antenna is its NO tune feature. Screws are simply inserted into predrilled holes with a supplied nutdriver.

The secret is out and people in the know say:

**CQ**–"The GAP consistently outperformed base-fed antennas...and was quieter."
**73**–"This is a real DX antenna, much quieter than other verticals."
**RF**–"To say this antenna is effective would be a real understatement. Switching back and forth on 40m between another multiband HF vertical and the GAP, there was no comparison. Signals were always stronger on the GAP, sometimes by S units, not just DB's."
**Worldradio** – "These guys have solved the problem associated with verticals. That is, an awful lot of RF is wallowing around and dropping into the dirt instead of going outward bound. A half-wave vertical does need radials if it is end fed (at the bottom). But the same half-wave vertical does not (as much, hardly at all) if is fed in the center."
**IEEE**–"Near field and power density analyses show another advantage of this antenna (asymmetric vertical dipole): it decreases the power density close to the ground, and so avoids power dissipation in the soil below it. The input impedance is very stable and almost independent of ground conductivity. This antenna can operate with high radiation efficiency in the MF AM standard broadcast band, without the classical buried ground plane, so as to yield easier installation and maintenance."

| MODEL | BANDS OF OPERATION | | | | | | | | | | | HT | WT | MOUNT | COUNTER-POISE | COST |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2m | 6m | 10m | 12m | 15m | 17m | 20m | 30m | 40m | 80m | 160m | | | | | |
| Challenger DX | ■ | ■ | ■ | ■ | ■ | | ■ | | ■ | ■ | | 31.5' | 21 lbs | Drop In Ground Mount | 3 Wires @ 25' | $259.95 |
| Eagle DX | | | ■ | ■ | ■ | ■ | ■ | | ■ | | | 21.5' | 19 lbs | 1-1/4" pipe | 80" Rigid | $269.95 |
| Titan DX (Just Released) | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | 25' | 25 lbs | 1-1/4" pipe | 80" Rigid | $299.95 |
| Voyager DX | | | | | | | ■ | | ■ | ■ | ■ | 45' | 39 lbs | Hinged Base | 3 Wires @ 57' | $399.95 |

**New Release: TITAN DX**



This all purpose antenna is designed to operate 10m-80m, WARC bands included. It sits on a 1-1/4" pipe and can be mounted close to the ground or up on a roof. Its bandwidth and no tune feature make it an ideal antenna for the limited space environment as well as a terrific addition to the antenna farm.

# VHF and UHF Fixed Station Vertical Antenna

## Model G6-270R Dual-band Base Antenna for 2 Meter and 440 MHz.

Created from the same design as the G7 and G6 series. Rugged and Solid fiberglass construction.
Optimum Gain and Wide Bandwidth. Consists of 5/8 λ over 5/8 λ on 2M and 4 x 5/8 λ on 440 MHz.

- Length: 7ft. 6 in.
- Weight: 5.3 lbs.
- Wind Survival: 100 mph.
- Mounting: 1-1/4" - 1-1/2" mast
- Max Power: 100 watts
- Gain: 6dBd VHF & UHF
- Bandwidth: 1.5:1 SWR
  2 MHz.- 2 Meters
  10 MHz.- 440 MHz.
- Feed: Shunt, DC ground
- Connector: N female

## Model G6-440 Omnidirectional Fixed Station

Each is pre-tuned at the factory for easy installation. Enclosed in a lightweight tapered fiberglass radome for low wind resistance. Compact size allows shipment via U.P.S. or Parcel Post.

### ELECTRICAL

- Maximum power input: 250 watts
- Gain: 6 dB
- Bandwidth: 8 MHz. under 1.5:1 SWR
- Impedance: 50 ohm nominal
- Lightning protection: direct ground
- Termination: Type N female

### MECHANICAL

- Length: 87"
- Weight: 5 lbs.
- Wind survival: 125 mph.
- Mounting: up to 2" mast

## G6-144B Two Meter Antenna Omnidirectional Fixed Station

**6dB GAIN - compared to 1/2 wave dipole.**

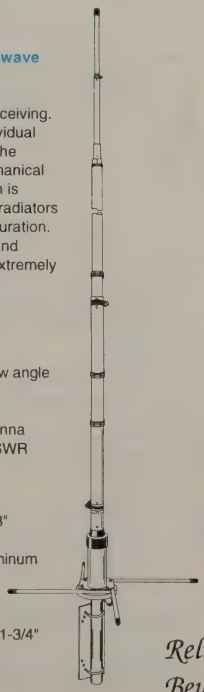
Get the tremendous advantage of 6 dB gain transmitting, 6 dB gain receiving. Whether your application is for individual fixed station or repeater operation the Hustler G6-144B has superior mechanical and electrical design. Optimum gain is achieved with two 5/8 wave-length radiators correctly phased in collinear configuration. Stated gain figure is conservative and maximum signal radiation is at an extremely low angle.

### ELECTRICAL

- 6 dB gain over 1/2-wave dipole
- Omnidirectional radiation pattern
- Maximum radiation - extremely low angle
- 50 ohm feed impedance
- Field adjustable: 140-150 MHz.
- SWR at resonance: 1.2:1 at antenna
- Bandwidth : 4 MHz. under 2:1 VSWR
- Shunt-fed with D.C. grounding

### MECHANICAL

Vertical element: 117" long, 1-1/8" telescopic to 3/8"
Constructed of high strength aluminum
Connector: SO-239
Wind load: 26 lbs. @ 100 mph.
Completely self-supporting
Mounting: Vertical support up to 1-3/4"
Shipping wt: 6.8 lbs.



## G7-144 Two Meter Antenna Omnidirectional Fixed Station

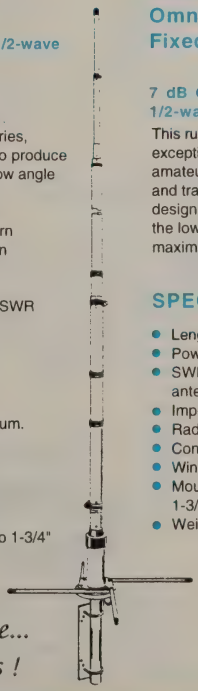
**7 dB GAIN - compared to 1/2-wave dipole.**

### ELECTRICAL

- Radiator: Collinear shunt-fed. Triple 5/8-wave elements in series, seperated by 2 phasing coils to produce maximum gain and extremely low angle of radiation.
- 7 dB gain over 1/2-wave dipole
- Omnidirectional radiation pattern
- Extremely low angle of radiation
- Tuning range: 144-148 MHz.
- VSWR: 1.2:1 at resonance
- Bandwidth: 4 MHz. under 2:1 VSWR
- Power: 600 watts
- 50 ohm feed inpedance
- Shunt fed with DC grounding

### MECHANICAL

- High strength fiberglass and alum.
- Completely self-supporting
- Length: 184"
- Radials: (4) 20-1/4" x 3/8" O.D.
- Connector: N-type
- Wind load: 26 lbs. @ 100mph.
- Mounting: Vertical support up to 1-3/4"
- Weight: 10 lbs.



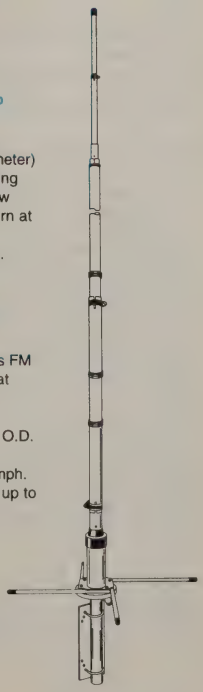
## G7-220 Omnidirectional Fixed Station

**7 dB GAIN - compared to 1/2-wave dipole.**

This rugged antenna means exceptional 220 MHz (1-1/4 meter) amateur performance, receiving and transmitting. A unique new design keeps the signal pattern at the lowest possible angle of maximum radiation efficiency.

### SPECIFICATIONS

- Length: 122" long
- Power capability: 600 watts FM
- SWR at resonance: 1.2:1 at antenna
- Impedance: 50 ohms
- Radials: (4) 14-3/4 x 3/16" O.D.
- Connector: Type N
- Wind load: 26 lbs. @ 100 mph.
- Mounting: vertical support up to 1-3/4" O.D.
- Weight: 7 lbs.



*Reliability & Performance...*
*Beyond your Expectations !*

HUSTLER

# VHF and UHF Mobile Antennas

## Collinear

### Model CGT-220

**5.2 dB Gain 5/8 λ Over 1/4 λ Collinear Trunk-Lip Mount Antenna**

- 1.1:1 SWR (typical) at resonance • 4 MHz. bandwidth under 1.5:1 SWR • Power rating: 200 watts FM • Heigth: 4' 9" including mount
- Spin knob to remove antenna
- 17' of low loss coax with connector

### Model CG-220

Has identical electrical characteristics as **CGT-220** but with 3/8 x 24 threaded base

### Model CGT-144

**5.2 dB Gain, 5/8 λ Over 1/4 λ Collinear Trunk-Lip Mount Antenna**

• 6 MHz bandwidth • 1.5:1 SWR • Power rating: 200 watts FM • Length: 7' 1" including mount • 180° swivel ball for vertical positioning • 17' coax with connector • No drilling required

### Model CG-144

Same as CGT-144 but has 3/8" x 24 threaded base

## Stainless Steel Mounts

- Exceptional performance and quality
- 180° adjustable reinforced stainless ball
- Professional quality Cycolac bases for greatest mechanical stability
- Exclusive "C" backup plate allows external installation
- Supplied with all mounting hardware and cork pad
- Applicable with all Hustler and other 3/8" x 24 thread antennas

SSM-1 **Professional Ball Mount and Spring**
SSM-2 **Ball Mount**
SSM-3 **Stainless Steel Spring with Coupling Stud**

## Quick Disconnect

### QD-2 100% Stainless Steel

Remove antenna from mount in seconds with push and twist release. Every part including the compression spring is manufactured from the best available 100% stainless steel. Special design of enclosed compression and lock assembly asssures freedom against ice and dirt jam up. Accommodates small, medium and large size mobile antennas. Equipped with 3/8" x 24 threads, female one end and male on the other.

## Professional Series Heavy Chrome

### Model C-32

Hustler professional ball mount. Furnished complete with rubber ad, steel backup plate, all nounting hardware, and hex wrench.

### Model C-29

Stainless steel, corrosion resistant and electropolished spring complete with 3/8" x 24 coupling stud.

### Model C-30

Chrome-plated steel spring complete with 3/8" x 24 coupling stud.

## RX Series

- 3.4 dB Gain; 5/8 λ, 100 watt rating
- 15 foot of coax with PL-259 connector
- Magnetic mount holds to 75 mph.

Model RX-2
2 meter, black and chrome
Model RX-220
220 MHz. black and chrome

Model RX-440

## FX Series

- 3.4 dB gain; 5/8 λ, 200 watt rating
- 15 feet of coax with PL-259 connector
- Magnetic mount holds to 100 mph.

Model FX-2
2 meter, black and chrome
Model FX-220
220 MHz., black and chrome
Model FX-2B
2 meter, all black
Model FX-220B
220 MHz. all black

## Unity Gain

### Model THF

**VHF/UHF Trunk-Lip Mount Antenna**

### Model UHT-1

**VHF/UHF Roof/Deck Mount Antenna**

### Model UGM

**VHF/UHF Magnetic Mount Antenna**

Extend range of handheld or portable radios. Trimmable 17-7 PH stainless steel radiator is cut to 1/4 wavelength for low SWR and unity gain from 140 to 500 MHz. Trim chart included. Highly efficient mylar-protected magnetic mount attaches conveniently to magnetic compatible surfaces. No drilling! Supplied ready for operation with 7' of mini-coax with BNC connector.

## Resonator Spring

### RSS-2

Finest quality stainless steel spring for use between resonator and Hustler antenna mast. This 3/4" x 3 x 1/2" spring absorbs shock when antenna strikes overhanging obstructions. Supplied ready for easy installation with 3/8" x 24 threads, female on one end, male on the other.

## MBM "Super" Magnet

- 95 lb. pull strength
- Powerful 5 inch dia. magnet
- 16 feet RG 58 coax with PL-259 connector
- 3/8" x 24 female threads
- Recommended for antennas up to 48" in length

## Model BBLT-144A

**3.4 dB Gain Trunk-Lip Mount Antenna**

- Adjustable 143-149 MHz.
- SWR: 1.1:1 at resonance
- Power rating: 200 watts FM
- Shunt-fed • Reduced static
- Length: 4'4" inc. mt. • Spring and 180° swivel ball for vertical positioning • 17' coax with connector • No drilling required

## BBL-144A

**3.4 dB Gain Roof Mount Antenna**

Same as **BBLT-144A** but mounts in 3/4" hole on a flat surface. 17' coax with connectors.

## Model SF-2

**Low Cost 3.4 dB Gain 2 meter 5/8 λ for 3/8" x 24 thread mounts**

- 1.2:1 SWR at resonance
- Power rating: 100 watts FM
- Tapered stainless radiator
- Length: 4'

## Model SF-220

**Low Cost 3.4 dB Gain 220 MHz 5/8 λ for 3/8" x 24 thread mounts**

## Model MKR-2 Radial Kit

Contains three decoupling radials and mount to convert series-fed mobile VHF antennas to fixed operation. Performance is comparable to many regular base antennas. Suitable for permanent installations or portable use. Heavy-duty zinc plated mast bracket and hardware. Accepts antennas with standard 3/8 x 24 threaded base.

## Bumper Mount

### BM-1

Design is rugged for supporting Hustler antenna with Standard or Super resonators. Heavy stainless steel strap, stronger than chain, fits most bumpers inconspicuously. Assembly is easily installed and held rigid by "J" bolts at the top and bumper strap clamp at bottom.
Mount includes 180° adjustable swivel ball for vertical positioning of antenna. Hardware is zinc plated for superior resistance against corrosion.

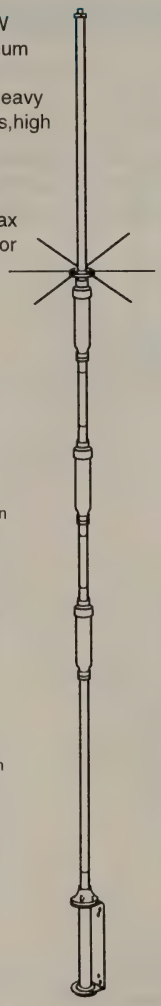
## Multi-band Adapter

### VP-1

Automatic bandswitching using any three Hustler H.F. mobile resonators. Adapts with any Hustler H.F. mast (MO-1, MO-2, MO-3, MO-4) for tri-band operation easily and quickly.

# Fixed Station Multi-Band HF Vertical Antennas

- Broadbanded - low VSWR at band edges
- Power capability - full legal limit on SSB or CW
- Solid one-inch fiberglass trap forms for optimum electrical and mechanical stability
- Heavy wall, high strength aluminum tubing, heavy duty aluminum mounting bracket and low loss,high strength insulators
- Stainless steel clamps and hardware
- Easy assembly and tuning
- Single line feed with any length of 50 ohm coax
- Use as ground mount with or without radials, or elevated mount with radials



## Model 6-BTV

**Bands** — 10-15-20-30-40 & 75 or 80 meters
**Length/weight** — 24'/16.5 lbs.
**Mounting** — Vertical support up to 1-3/4" O.D.
**Wind load** — 29 lbs. @ 70 mph.
**Power capability** — Full legal limit SSB/CW
**VSWR at resonance** — 1.15 to 1 or better
**Bandwidth** — VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. on 75 or 80 meters)

## Model 5-BTV

**Bands** — 10-15-20-40 & 75 or 80 meters
**Length/weight** — 25'1" /17 lbs.
**Mounting** — Vertical support up to 1-3/4 O.D.
**Wind load** — 29 ibs. @ 70 mph.
**Power capability** — Full legal limit SSB/CW
**VSWR at resonance** — 1.15 to 1 or better
**Bandwidth** — VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. on 75 or 80 Meters)

## Model 4-BTV

**Bands** — 10-15-20-40 meters
**Length/weight** — 21'5"/15 lbs.
**Mounting** — Vertical support up to 1-3/4" O.D.
**Power capability** — Full legal limit SSB/CW
**VSWR at resonance** — 1.15 to 1 or better
**Bandwidth** — VSWR 1.6:1 at band edges

## 0 Meter Add-on Kit for 4-BTV nd 5-BTV

**Model 30-MTK**
Full 30 meter band coverage
Will not affect normal operation
Easy installation
All hardware included
Weight: 5 lbs.

## Hustler Resonators

### Standard Resonators

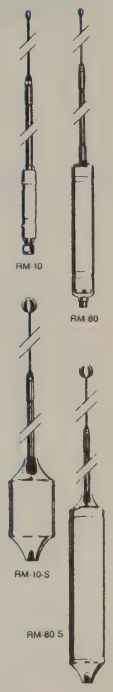
Power rating - 400 watts SSB

| Part | Description | Approx. Bandwidth 2:1 SWR or Better |
|---|---|---|
| RM-10 | 10 METER | 150-250 KHz. |
| RM-11 | 11 METER | 150-250 KHz. |
| RM-12 | 12 METER | 90-120 KHz. |
| RM-15 | 15 METER | 100-150 KHz. |
| RM-17 | 17 METER | 150 KHz. |
| RM-20 | 20 METER | 80-100 KHz. |
| RM-30 | 30 METER | 50-60 KHz. |
| RM-40 | 40 METER | 40-50 KHz. |
| RM-75 | 75 METER | 25-30 KHz. |
| RM -80 | 80 METER | 25-30 KHz. |

### Super Resonators

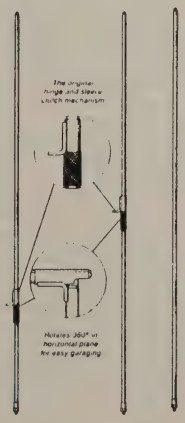
Power rating - full legal limit. Super Resonators also offer wider bandwidth, especially on 40, 75 and 80 meters.

| Part | Description | Approx. Bandwidth 2:1 SWR or Better |
|---|---|---|
| RM-10-S | 10 METER | 250-400 KHz. |
| RM-11-S | 11 METER | 250-400 KHz. |
| RM-15-S | 15 METER | 150-200 KHz. |
| RM-20-S | 20 METER | 100-150 KHz. |
| RM-40-S | 40 METER | 50-80 KHz. |
| RM-75-S | 75 METER | 50-60 KHz. |
| RM- 80-S | 80 METER | 50-60 KHz. |




## Mobile HF Antennas

### Hustler Masts

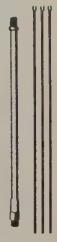


**MO-1** Mobile mast, 54" high, for deck or fender mounting-folds over 15" above base.

**MO-2** Mobile mast, 54" high, for bumper mounting - folds over 27" above base.

**MO-3** Mobile mast, 54" high, solid - does not fold over.

**MO-4** HF Mobile Mast
- For use with Hustler HF resonators
- Only 22" long
- Suitable for trunk or deck mounting
- Includes 3 new tip rods



MO-4

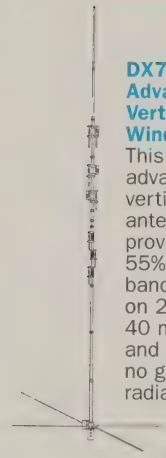
*Reliability & Performance... Beyond Your Expectations!*

# PROFESSIONAL STANDARDS ASSURE AMATEUR SATISFACTION

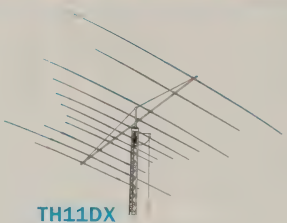
## *Innovation • Value • Customer Service*

From the world's leading antennas and rotators to warranties, after-sale support and responsive, knowledgeable customer service, Hy-Gain by Telex is the amateur's preferred choice for exceptional performance and extraordinary reliability.

**Highlighted here is just a sampling of innovative products available from Hy-Gain. While examining this catalog, keep your eyes peeled for detailed information about many more Hy-Gain products and accessories.**

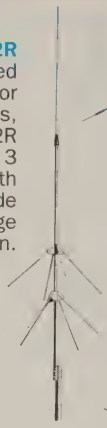


**DX77 Advanced Vertical Windom**
This advanced vertical antenna provides 55% greater bandwidth on 20 and 40 meters, and requires no ground radials.

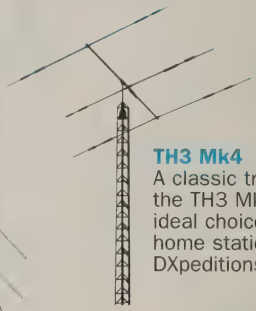


**TH11DX**
This uniquely designed antenna provides the frequency coverage of a log periodic, **plus** the performance of a monobander.

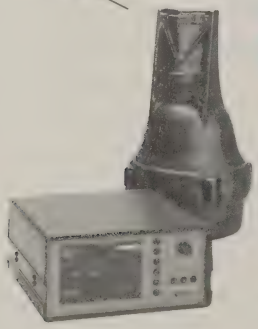
**DX88**
If you want 80 meters in a vertical, this is your antenna. Better bandwidth than found in add-on kits.



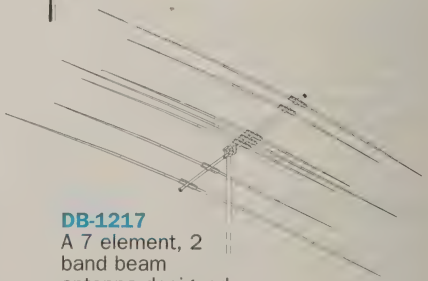
**V2R**
A rugged antenna for 2 meters, the V2R delivers 3 dBd gain with a wide coverage pattern.



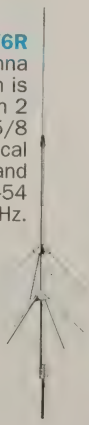
**TH3 Mk4**
A classic tribander, the TH3 Mk4 is an ideal choice for home stations and DXpeditions.



**Ham V with DCU-1 Digital Control System**
The Ham V is designed for medium communications antenna arrays of up to 15 sq. ft. (1.4 m2) wind load area. The **DCU-1** features digital and analog displays with six presets, automatic brake delay, motor slow down, automatic calibration and programmable center of rotation.

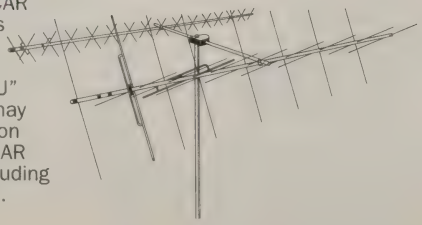


**DB-1217**
A 7 element, 2 band beam antenna designed for operation on the 12 and 17 meter amateur bands, and packaged for DXpeditions.



**V6R**
This antenna design is based on 2 collinear 5/8 wave vertical radiators and covers 51-54 MHz.

**OSCAR LINK**
Hy-Gain's OSCAR LINK antennas are ready for Phase 3D on the "V" and "U" bands. They may also be used on the other OSCAR satellites, including the new JAS-2.



**hy-gain® by Telex**

***Your Performance Advantage***

Telex Communications,® Inc.
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Lincoln, NE 68505 USA
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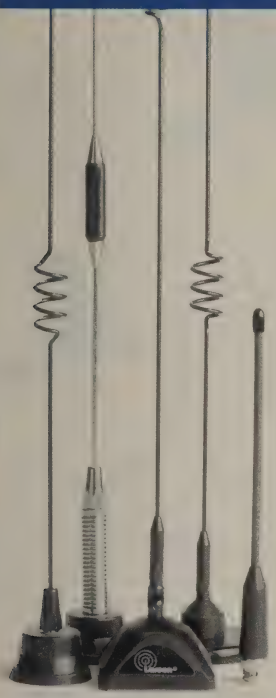
E-mail: hygain@telex.com
Web: http://ourworld.compuserve.com/homepages/hygain

# Quality Performance... You Can Hear



## Simultaneous VHF and UHF Communication Over Wide Bandwidths

### Larsen's Dual Band Series

Larsen dual band antennas provide excellent performance for simultaneous use of VHF and UHF amateur frequencies. Each Larsen dual band antenna is factory preset to guarantee optimum performance with no tuning required.

| | NMO 2/70 SH | MM 2/70 | NMOQ 2/70 B | KD3 2/70 |
|---|---|---|---|---|
| Freq. | 144-148/440-450 MHz | 144-148/440-450 MHz | 144-148/440-450 MHz | 144-148/442-448 MHz |
| Gain | Unity | Unity | Unity | Unity |
| Power | 100 Watts | 100 Watts | 100 Watts | 25 Watts |
| Type | VHF: Center Loaded 1/4 λ.<br>UHF: Center Loaded 3/4 λ. | VHF: Center Loaded 1/4 λ.<br>UHF: Center Loaded 3/4 λ. | VHF: Center Loaded 1/4 λ.<br>UHF: Center Loaded 3/4 λ. | VHF: Loaded 1/4 λ.<br>UHF: 1/4 λ. |
| Base | NMO UHF BASE B w/ spr | 3" Round mag. mount | NMO UHF BASE B | TNC |
| Height | 17" | 17" | 18" | 8" |
| Whip | W NMO 2/70 SH | W NMOQ 2/70 B | W NMOQ 2/70 B | N/A |

λ = wave length

| | KD4 2/70 | NMO 2/70 C | NMO 2/70 B | KG 2/70 UD PL |
|---|---|---|---|---|
| Freq. | 144-148/442-448 MHz | 144-148/440-450 MHz | 144-148/440-450 MHz | 144-148/442-448 MHz |
| Gain | Unity | 2.4/4 dB | 2.4/4 dB | 2.4/4.5 dB* |
| Power | 25 Watts | 100 Watts | 100 Watts | 50 Watts |
| Type | VHF: Loaded 1/4 λ.<br>UHF: 1/4 λ. | VHF: 5/8 Wave<br>UHF: Collinear | VHF: 5/8 Wave<br>UHF: Collinear | VHF: 1/2 λ.<br>UHF: Collinear |
| Base | BNC | NMO 2/70 BCO | NMO 2/70 BCO | KG 2/70 O/S |
| Height | 8" | 36.75" | 33.5" | 32.5" |
| Whip | N/A | W 2/70 | W 2/70 B | W KG 2/70 |

λ = wave length *Ground plane required for gain.

## Low Impedance Design Creates A Premium On-Glass Antenna

### Larsen's Kūlglass® Series

Larsen's Kūlglass (KG) series uses a patented low impedance design and advanced materials to produce the world's best on-glass antenna. Our KG series uses advanced resin polymer plastic to completely enclose the circuit board or loading coil for mechanical durability and weather resistance. 3M's best adhesive tape, plus Larsen's unique bonding enhancer, ensure the best possible grip to the glass.

| | KG 144 UD PL | KG 220 UD PL | KG 440 UD PL |
|---|---|---|---|
| Freq. | 144-160 MHz | 220-225 MHz | 440-460 MHz |
| Gain | 2.4 dB | 2.4 dB | 2.4 dB |
| Power | 100 Watts | 100 Watts | 100 Watts |
| Connector | PL 259 (Loose) | PL 259 (Loose) | PL 259 (Loose) |
| Type | 1/2 λ. | 1/2λ. | 1/2 λ. |
| Base | KG 144 O/S | KG 220 O/S | KG 440 O/S |
| Height | 48" | 26.5" | 15" |
| Whip | W KG 144 | W KG 220 | W KG 440 |

λ= wave length

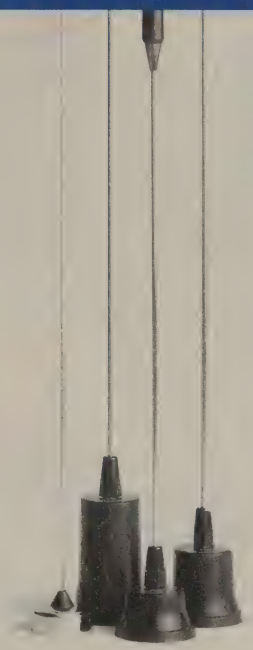
## Outstanding Transmit Range and Durable Construction

### Larsen's Kūlduckie® Portable Series

Superior transmit range and tough mechanical durability are the hallmark of Larsen portables. All of our center cores are made of brass or copper plated steel to maximize RF emission. Fully soldered connections and silver plated components improve electrical efficiency. Our double spring BNCs also reduce wear on your radio mount. Other mounting styles available.

| | KD4 146 | KD4 146 HQ (2m) | KD14 2M HW |
|---|---|---|---|
| Freq. | 144-148 MHz | 144-148 MHz | 144-148 MHz |
| Gain | Unity | Unity | Unity |
| Power | 25 Watts | 25 Watts | 25 Watts |
| Type | 1/4 λ, Helical | 1/4 λ, Helical | 1/2 λ, Telescoping |
| Base | BNC | BNC | BNC |
| Height | 8" | 10.5" | 8.5" to 42" |
| Whip | N/A | N/A | W KD14 2M HW |

λ= wave length



## Proven Superior Performance and Rugged Dependability

### NMO Mobile Antennas

Larsen's own version of the standard 3/4" Motorola TAD/TAE type mount uses advanced design, materials, and construction to provide a premium mount. For demanding outdoor applications, the chemical resistant NMO series is housed in a resin polymer plastic shell which is completely molded around the nickel plated brass whip stud to eliminate moisture damage. Our superseal gasket also greatly reduces water intrusion under the base.

| | NMO 27 C | NMO 150 C | NMOQ SPEC | NMO 220 C | NMO 440 C |
|---|---|---|---|---|---|
| Freq. | 27-31 MHz | 144-174 MHz | 136-512 MHz | 220-225 MHz | 440-460 MHz |
| Gain | Unity | 3 dBd | Unity | Unity | 4.5 dBd |
| Power | 200 Watts | 200 Watts | 200 Watts | 200 Watts | 200 Watts |
| Type | Loaded 1/4 λ. | 5/8 λ. | 1/4 λ. | 5/8 λ. | 5/8 over 1/2 λ. |
| Base | NMO 27 BCO | NMO 150 BCO | N/A | NMO 220 BCO | NMO UHF BASE B |
| Height | 53" | 51.75" | 21" | 34.5" | 33" |
| Whip | W 490 | W 490 | N/A | W 400 | W 154 |

λ = wave length

Larsen®

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E-mail= larsen@larsenet.com

Canadian Larsen Electronics, Ltd.
5049 Still Creek Ave., Burnaby, BC V5C 5V1
604 299-8517, Fax: 604 299-4191

# pro·am® by Valor®

"The Clear Connection" ™

## 160-6 Meters Mobile

### PHF Series Antennas

Pro-Am's Monoband PHF Series consists of a black fiberglass lower section with integral coil and an adjustable (and removable) stainless steel whip (except for PHF160). These time-proven HF antennas are especially designed for maximum efficiency, low SWR, and broad bandwidth. They are power rated at 250 Watts P.E.P. and built to withstand considerable use. Standard 3/8 x 24 threads. Total assembled length on all models: 96". (Exception: PHF6: 58")

| Model | Band | Band Width |
|---|---|---|
| PHF160 | 160 Meters | 12 KHz |
| PHF75 | 75 Meters | 36 KHz |
| PHF40 | 40 Meters | 60 KHz |
| PHF30 | 30 Meters | 100 KHz |
| PHF20 | 20 Meters | 150 KHz |
| PHF17 | 17 Meters | 175 KHz |
| PHF15 | 15 Meters | 200 KHz |
| PHF12 | 12 Meters | 300 KHz |
| PHF10 | 10 Meters | 500 KHz |
| PHF6 | 6 Meters | 1000 KHz |

## Micro-Mag™ 2 Meter and 70CM

### MM270B

Dual Band MICRO-MAG™ Kit with 9' of RG174 Cable to BNC Connector. 1/4 Wave at 2m and 5/8 Wave at 70cm. Typical VSWR: Less than 1.5:1 through the band. Max. Power: 50 Watts on 2m and 25 Watts on 70CM.

## Through Glass 2 Meter

### GM144

2M Through-The-Glass Antenna Kit featuring a 27-1/2" Copper Plated Whip with Black Finish and 14' of RG58 Cable with PL-259 Connector. Gain: 2.5dB over 1/4 wave. VSWR: 1.5:1 through the band. Max. Power: 50 Watts. Field Tuneable.

*(**NOTE:** Some newer automobiles are equipped with "passavated glass" which does not permit on-glass antennas to work properly. Please check your owner's manual or your dealer.)*

## Through-Glass 2 Meter and 70CM

### GM270

Dual Band Through-The-Glass Antenna Kit featuring a 26" Copper Plated Whip with Black Finish and 14' of RG58 Cable to PL-259 Connector. Gain: 2.6dB over 1/4 wave at 2m & 4.0dB over 1/4 wave at 70cm. Typical VSWR: Less Than 2.0:1 through the bands. Max. Power: 50 Watts. Field Tuneable.

## Hand-Held Antennas

### 144BNC

Electrical 1/4 Wave "Rubber Duck" with high performance in the VHF range of 144-148 MHz. 12" in length. Provided with BNC connector for quick disconnect.

### 450BNC

Full 1/4 Wave "Rubber Duck" with high performance in the UHF range of 430-470 MHz. 6-1/2" in length. Comes with BNC connector for quick disconnect.

## Mag Mount Kit

### VAA002

2 Meter Mag Mount Kit. 17-7 ph Stainless Steel Whip, 12' of Cable with PL-259 Connector. Can be cut for 220 or 450 MHz. Available in Chrome or Black Finish. (Please specify "B" after Model Number for Black)

### VAA002BN

Same as VAA002 but with BNC Connector.

## Multi-Band Antenna System

### AB5

Pro-Am's AB5 System consists of a 4' aluminum mast and tri-top adaptor with resonators for 10, 15, 20 40, and 75 meters. Mast fits any standard 3/8 x 24 thread mount. The 10, 15, and 20 meter resonators cover SSB ranges without extra tuning. The interchangeable 40 and 75 meter resonators are easily tunable.

## VHF Antenna

### PHB144

2M, 3dB Gain VHF Antenna featuring a matching Low Loss Coil and moto style threads. VSWR: 1.5:1. Power: 100 Watts.

## Dual Band Antenna

### MO144-440

Dual Band Antenna to Cover it All! 19" Stainless Steel Whip. 1-1/8" Threads Match Pro-Am's Mounts and 3/4" Hole Motorola TAD/TAE Mounts. Great for all band scanners 25 MHz - 1.3 GHz. SWR: Less than 2:1. Gain: Unity on 2m and 2.1dB over 1/4 Wave on 70CM. Power FM: 150 Watts.

## Mounts and Accessories

### PAT2

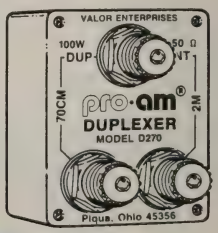
Low Profile Trunk Mount includes 17' of RG58 Cable with PL-259 Connector. (Available in Black Finish: specify with a "B" suffix.)

### MM3401

Maxi-Magnet Mount Kit features three 5" (401) magnets properly spaced on a heavy duty aluminum frame. The MM3401 is pre-wired to Valor's patented wafer termination with 17' of RG58 coax and PL-259 connector. Accepts standard 3/8" x 24 antennas. Available with Black magnet cups: **MM3401B.**

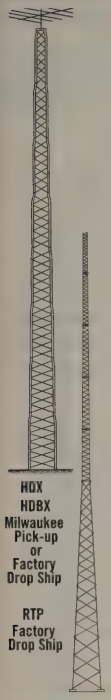
### PAM

3-3/4" Diameter Low Profile Magnet Mount Kit pre-wired with 12' of RG58 Cable to PL-259 Connector. (Available in Black or Chrome Plated; Add "B" suffix for Black)




### D270

Duplexer for 2-Band Antennas. Provides cross-band operation with a 2m/70cm antenna. Power rated up to 100 Watts with 50 Ohm impedance. Size: 2.25" x 3" x 1".




# ROHN®

## Heavy Duty HDX-Series Towers for HAM RADIO

All steel with X-brace construction for strength that allows a free-standing configuration without guy wires at 70 mph windspeed.with antennas up to 10 sq. ft. wind area and boom lengths not exceeding 10 ft. The galvanized steel provides an attractive and maintenance-free finish. The entire tower can be assembled on the ground and hinged up in to position with the optional hinged base, or built vertically, section by section. Supplied with BXB base stubs for concrete mounting, rotator plate, mast clamp and hardware. All makes of rotators can be installed on the rotator plate inside of the top section. Tubing furnished that can be held in place with the mast clamp on the top plate to act as a thrust sleeve for a 1-1/4 in. mast.

| Model | Height. | Sections | Windload @ 70 mph | Weight | PRICE |
|---|---|---|---|---|---|
| HBX-40/BXB-6 | 40 ft. | 5 | 10 sq. ft. | 276 lbs | $399.95 |
| HBX-48/BXB-7 | 48 ft. | 6 | 10 sq. ft. | 353 lbs | 499.95 |
| HBX-56/BXB-8 | 56 ft. | 7 | 10 sq. ft. | 444 lbs | 629.95 |

## Heavier Capacity HDBX-Series

Same structural features of the HDX, but capable of up to 18 sq. ft. of antenna capacity at 70 mph wind speed.

| Model | Height. | Sections | Windload @ 70 mph | Weight | PRICE |
|---|---|---|---|---|---|
| HDBX-40/BXB-7 | 40 ft. | 5 | 18 sq. ft. | 330 lbs | $469.95 |
| HDBX-48/BXB-8 | 48 ft. | 6 | 18 sq. ft. | 422 lbs | 619.95 |

## RTP-Series

A new line of Rohn self-supporting amateur towers designed to the latest EIA revisions. All models are hot dip galvanized after fabrication with a minimum of 2 oz. of zinc per square ft of surface. They are shipped complete with the necessary sections, rotator plate, top plate, short base or foundation hardware, grounding materials and anti-climb warning sign. Some sections are also supplied with step bolts for climbing. The rotator plate is pre-drilled to accept the most popular rotators. The top plate is predrilled to accept a TB-3 thrust bearing for a 2 inch mast or a TB-4 for a 3 inch mast. The thrust bearing is optional and must be ordered separately. These towers are designed for 70, 80 or 90 mph basic wind speeds and to accommodate most amateur antenna loads to heights of 190 feet. Shown here is a selection of popular ham models.

| Model | Height. | Sections | Windload @ 70 mph | Weight | PRICE |
|---|---|---|---|---|---|
| SSO40D70RPT | 40 ft. | 2 | 16.7 sq. ft. | 501 lbs | $1199.95 |
| SSO50D70RTP | 50 ft. | 3 | 15 sq. ft. | 564 lbs | 1439.95 |
| SSO60D70RTP | 60 ft. | 3 | 15 sq. ft. | 1013 lbs | 2099.95 |
| SSO70D70RTP | 70 ft. | 4 | 13.3 sq. ft. | 1076 lbs | 2269.95 |
| SSO80D70RTP | 80 ft. | 4 | 13.3 sq. ft. | 1539 lbs | 3119.95 |
| SSO90D70RTP | 90 ft. | 5 | 11.7 sq. ft. | 1656 lbs | 3369.95 |

## Glen Martin Engineering

Featuring a selection of complete Aluminum Tower Packages, Roof-Top Tripods and the *Hazer* Antenna Tram System. Factory Drop Ship. Price includes 48-State Shipping.

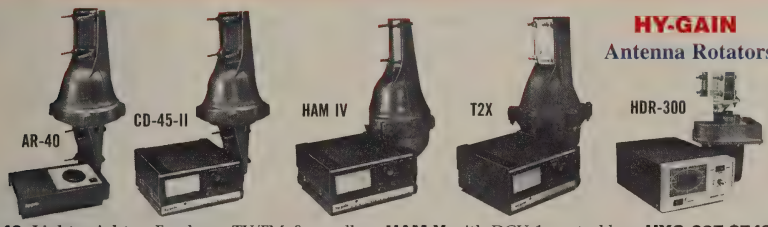
## U.S. TOWER

Self-supporting steel crank-up towers Three compact models: **TMM-series** • Six standard models: **TX-series** • Five heavy-duty models: **HDX-series** • Seven tubular crank-up models: **MA-series**.• Accessories • Factory Drop Ship

## HY-GAIN

**Steel Crank-up Towers**
Four models available: 37, 52, 54 and 70 ft.
Factory Drop-Ship

**See Price List & Index for more Information on these Manufacturers' products**




## HY-GAIN Antenna Rotators

**AR-40 Lightweight** • For large TV/FM & smaller Ham Antennas up to 3.0 sq. ft. windload area when mounted in-tower, or 1.5 sq. ft. mast mounted with supplied lower support bracket. Rotor: 17⅜"h x 8" dia., 12 ball bearings, disc brake. Accepts mast sizes up to 2⅛" diameter. Automatic, silent control box – dial & touch for desired direction. Use Belden 8-wire control cable. 14 lbs ..... **HYG 305 $239.95**

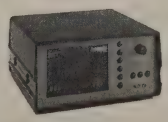
**CD-45-II Medium Duty** • For antennas up to 8.5 sq. ft. windload area when mounted in-tower, or 5 sq. ft. when mast mounted with supplied lower support bracket. Rotor: 17⅜"h x 8" dia., 48 ball bearings, disc brake. Mast sizes up to 2⅛" dia. Illuminated directional indicator, separate snap action brake and rotation switches. Meter face reversible for N or S center scale, as desired. Use Belden 8-wire control cable. 20 lbs ..... **HYG 302 $339.95**

**HAM IV Heavy Duty** • For medium-sized antennas with up to 15 sq. ft. windload area mounted in-tower, or 7.5 sq. ft. mast mounted with opt. lower bracket. Rotor: 13½"h x 8" dia., 98 ball bearings, electric locking steel wedge brake. Accepts mast sizes up to 2⅛" dia. Illuminated indicator, separate snap-action brake & rotation switches, N or S center scale. Use Belden cable. 24 lbs .....**HYG 304 $449.95**

**HAM V** with DCU-1 control box **HYG 307 $749.95**

**T2X Tailtwister Extra Heavy Duty** • For large antennas up to 20 sq. ft. windload when mounted in-tower, or 10 sq. ft. mast mounted with optional lower support bracket. Rugged casting –14⅛"h x 9⅝" dia., 138 ball bearings, electric locking steel brake. Mast sizes up to 2⅛" diameter. Illuminated directional indicator, separate snap action brake and rotation control switches, North or South center scale. Belden 8-wire cable. 28 lbs. ..... **HYG 303 $539.95**

**HDR-300/A Deluxe Extra Heavy-Duty** • In tower mount – for large antenna arrays up to 25 sq. ft. windload. Rotor: 7"x 9" x 10"h, 138 ball bearings, solenoid operated locking brake. Masts up to 3" diameter. Digital directional indicator accurate to 1°. Separate brake and rotation controls. Use Belden 8-wire control cable. 55 lbs..... **HYG 300 $1049.95**



**DCU-1 Digital Rotor Control** Digital and Analog displays with 6 presets. Preprogram your favorite beam headings! one-degree accuracy. RS-232 input with for computer control. For T2X or Ham IV .....**HYG 306 $539.95**

# UNIVERSAL

## FREE STANDING ALUMINUM TOWERS

- ★ HAM RADIO TV & FM
- ★ RUGGED
- ★ LIGHTWEIGHT
- ★ RUST FREE
- ★ EZ ASSEMBLY & INSTALLATION

**Configurations available from 30-100 feet with various wind load selections to meet almost any application. Self-Supporting – no need for unsightly guy wires at rated load. Factory Drop-Ship. For more information see the Price List and the Index for the Universal display page.**

## PHILIPS Antenna Rotator

**U-105 Antenna Rotator** featuring a one-piece cast aluminum housing, large bearing surfaces, reinforced mast support and a ball bearing for the vertical load. Precision-cut, hardened steel drive train and high torque–well equipped to handle small to medium VHF/UHF amateur & the largest TV & FM arrays. Control unit is smooth & quiet, synchronized with the drive by synchronous motors..... **$69.95**

| | |
|---|---|
| Rotation Range .....360° +5°-0 | Support Mast Size .....1¼ –2" dia. |
| Rotation Time.....70 Seconds | Control unit ... 7"w x 5⅞"d x 2⅜"h |
| Rotation Torque.....8 ft./lbs. | Weight (Rotator + control)..10 lbs |
| Max. Vertical load .....100 lbs. | Control cable (4-wire) Belden 8484 |

**TB-105 Support Bearing** for extra-sturdy installation when using the U-105 rotator. Relieves wear and tear on the drive unit imposed by wind loads. All ball bearing design, weather-tight seal. Installs on the support mast, above the U-105..... **$18.95**

## YAESU Special Rotators

more rotators ... see other YAESU in the Price List

**G-5400B Azimuth-Elevation Rotator** For satellite, moonbounce, etc. where both horizontal and vertical rotation is required in a single unit. Full 180° rotation.in 58 seconds; 360°. azimuth rotation time: 50 seconds. Handles 440 lbs of vertical load and masts from 2" to 2½". The control box has large dual meters which show separate azimuth and elevation indication with ±4% aiming accuracy. Use Belden 8-wire control cable..... **$539.95**

**G-500A 180° Elevation Rotor** For satellites, moonbounce work, etc. Smooth, 180° elevation rotation time in 60 seconds. Large meter with ±3% aiming accuracy. Accepts boom diameters from 1¼" to 1⅝". Use Belden 8-wire control cable..... **$279.95**

## UNADILLA

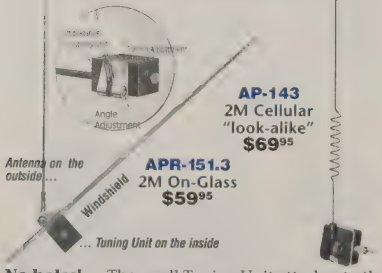
**W2AU/W2VS 5-Band Antenna Kit**
Provides Low SWR on 80 and 40 meters and resonant performance on 10, 15 and 20 meters. Includes 40 meter traps, W2AU 1:1 balun, end insulators, 120 ft. of #14 stranded copper wire, and assembly instructions. Approximately 110 ft. long, rated 2KW PEP . **$85.95**

**REYCO W2VS Antenna Traps**
Add these traps to your dipole for multiband operation on two to six bands. *For example:* add the 40 meter pair (KW-40) and get 40 and 80 meter operation. For 10, 15, 20 ,40, 80 and 160 meters, add all five pairs – 33 combinations! Selecting traps is easy. Just list the bands you want to cover, listing the highest frequency band first. You will need a pair of traps for each band except the one with the lowest frequency..... **See the Price List**

**W2AU Ferrite Baluns**
Provide a smooth transition from unbalanced coaxial transmission line to balanced antennas such as dipoles, quads & yagis. Produces proper current distribution resulting in reduced feedline radiation for maximum power transfer, gain and reduced possibility of TVI and BCI. Replaces center insulator, DC grounded for lighting protection and has a convenient center eye hook for support. Usable from 1.8 to 40MHz and rated at 2KW PEP. Available in 1:1 or 4:1 ratios, or **Beam Balun** ..... ea. **$24.95**

**W2DU Non-Transformer Choke Baluns**
A high efficiency, transformerless 1:1 balun. The HF model is the only one available that works on 160 meters! They all handle a VSWR up to 5:1 at the legal power limit, allowing use with antenna tuners. The VHF model eliminates the usual rod and tube hardware balun assembly normally used at those frequencies. Models: **HF** (1.8-30MHz), **VHF** (30-250MHz), **Beam Balun** (40–10 meters) .. ea. **$26.95**

## ANTENNA SPECIALISTS
"On-Glass™"Mobile Antennas



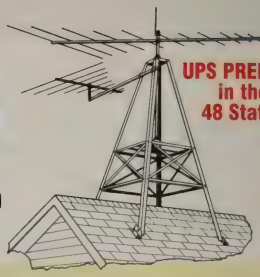

**No holes! ...** The small Tuning Unit attaches to the glass inside of the vehicle, and couples capacitively thru-the-glass to the Radiating Element mounted on the outside. Installs with a easily removable adhesive. Includes adhesive, 15 feet of coax cable with a PL-259 connector.

| | | | |
|---|---|---|---|
| **Power** | 100 watts | **Radiator** | Electrical 1/2-wave |
| **Frequency Range** | 144-174 MHz (APR-151.3l) 138-150 MHz (AP-143) | **Coupling Unit** | shunt fed, DC gnd |
| | | **Whip Material** | Stainless steel, black DURA-COAT ™ finish |
| **Bandwidth** | 6 MHz, tunable | **Whip Length** | 33 in. (APR-151.3) 23 in. (AP-143) |
| **VSWR** | Less than 1.5:1 | | |
| **Impedance** | 50Ω nominal | **Cable** | RG-58/U, 15 ft. wi/ PL-259 |

MasterCard VISA DISCOVER American Express Cards

## GLEN MARTIN ENGINEERING

# ROOF-TOP TOWERS



**UPS PREPAID in the 48 States**

High Quality • Anodized Aluminum Construction • Lightweight yet Extra Heavy Duty • Will not Rust / Stainless Steel Bolts • Ideal Roof-Top support for Ham Antennas • Weather monitors, Scanner & AMSAT Antennas

*D=Distance from top surface to rotor mount

| MODEL | Height | *D, inches | Base width | Max Ant. in sq. ft. @ 87 mph | 100 mph | 112 mph | Max. Ant. weight | Shipping weight | Price w/UPS |
|---|---|---|---|---|---|---|---|---|---|
| RT-424 | 4.5 | 34.75 | 24" | 6 | 4.5 | 3.6 | 100 lbs. | 20 lbs. | $159.95 |
| RT-832 | 8.0 | 43.75 | 32" | 8 | 6 | 4.8 | 120 lbs. | 36 lbs. | $229.95 |
| RT-936 | 9.0 | 43.75 | 36" | 18 | 13.5 | 10.5 | 130 lbs. | 78 lbs. | $389.95 |
| RT-1832 | 17.5 | 37.62 | 32" | 12 | 9 | 7.2 | 110 lbs. | 88 lbs. | $524.95 |

# TOWERS & HAZER

**You NEED the HAZER** The Hazer is a unique tram that rides up & down the outside of your **Martin** tower. Raise and lower your antennas by simply turning a winch crank! Hazer 2, 3, 4, 5, 6 wrap around the tower and works best on 50 ft. and lower towers with kevlar guywires. Hazer 7 incorporates it's own separate track. M-1860A & M-1870A includes kevlar guy wire sets for two levels. Kevlar guys are stronger than steel and electrically transparent.

**COMPLETE TOWER PACKAGE** INCLUDES: **10-FOOT Tower Sections; Concrete footing; Hinged Base, for walk up erection; HAZER, winch, cable, etc; KEVLAR Guy Wire Kit, turnbuckles, earth screw anchors, hardware; Premium Thrust Bearing, 10-Foot Mast and 8 ft. Earth Ground rod. Shipped motor freight prepaid.**

**ALL YOU ADD IS CONCRETE, YOUR ROTATOR & ANTENNAS!**

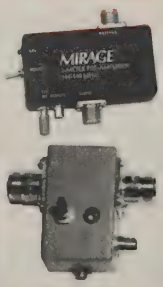
| ORDER # | TOWER PACKAGE | FREIGHT PREPAID |
|---|---|---|
| M1330A | 30 ft., 12 sq. ft., 87 MPH w/Hazer 5 | $1615.95 |
| M1340A | 40 ft., 12 sq. ft., 87 MPH w/Hazer 5 | $1832.95 |
| M1840A | 40 ft., 16 sq. ft., 87 MPH w/Hazer 6 *See Price List for Accessories* | $2150.95 |
| M1850A | 50 ft., 16 sq. ft., 87 MPH w/Hazer 6 | $2410.95 |
| M1860A | 60 ft., 15 sq. ft., 87 MPH w/Hazer 7 | $3356.95 |
| M1870A | 70 ft., 15 sq. ft., 87 MPH w/Hazer 7 | $3660.95 |

**HAZERS FOR ROHN 20/25G TOWERS**

| CAT # | MAX LOAD | WIND ABILITY | MADE OF | UPS PPD |
|---|---|---|---|---|
| H-2 | 175 Lbs. | 12 Sq. Ft. *See Price List for other Models* | Aluminum | $359.95 |
| H-3 | 150 Lbs. | 8 Sq. Ft. | Aluminum | $269.95 |
| H-4 | 200 Lbs. | 16 Sq. Ft. | Galv. Steel | $344.95 |
| TB-25 Thrust Bearing | | | | $89.95 |

## MIRAGE

**GaAsFET Preamps for 10, 6, 2, 1¼ m & 70 cm**



These High Gain, Ultra Low Noise GaAs FET Preamplifiers improve weak reception by providing from 15 to 25dB of receive gain with a Noise Figure of less than 0.6dB.

In-line design with automatic transmit & receive switching for up to 160 watts throughput. Choose the in-shack model (KP-1) or mast mount model (KP-2) which provides the additional benefit of reducing feedline loss.

See MIRAGE in the Price List

**ZENITH High Pass Filter**
Install in TV antenna lead-in to eliminate interference from 6–160m transmitters. >45dB attenuation @ 52MHz & lower. For 75Ω systems, type-F connectors. 2" x 1¾"x 1" ....A-8477 **$9.95**

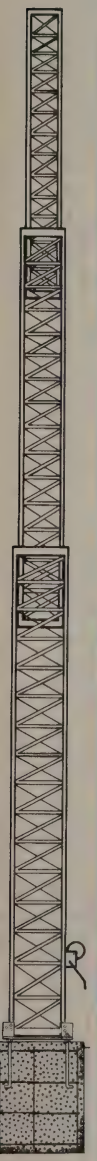
## DAIWA
**Coaxial Switches**

**CS-201 Two position Coax Switch (left)** Cavity construction for low VSWR, less than 0.2dB insertion loss and 60dB isolation up to 600MHz. 2.5KW PEP or 1KW CW. SO-239 connectors, the unused terminal is always grounded.for protection....**$29.95**

**CS-401 Four position Coax Switch (right)** Cavity construction for low VSWR, less than 0.2dB insertion loss and 60dB isolation up to 800MHz. 2.5KW PEP or 1KW CW. SO-239 connectors, unused terminals are always grounded. .....**$119.95**

## RF PRODUCTS

**BNC Magnetic Mount**
Improve mobile HT performance by getting the RF outside of the vehicle. Simply attach the rubber duck antenna from your HT to this handy magnetic mount and place it outside, on the roof or trunk, where it can radiate without obstruction. 10 ft. coax cable & BNC connector....199-416 **$17.95**



## MA SERIES CRANK-UP TUBULAR TOWERS

**Will handle 10 sq. ft. antennas at 50 MPH winds.**

| MODEL NO. | HEIGHT MAX. | HEIGHT MIN. | NUMBER SECTIONS | WT # | SECTION OD Top | SECTION OD Bot. | BASE SIZE | AES PRICE |
|---|---|---|---|---|---|---|---|---|
| MA-40 | 40 ft. | 21' 6" | 2 | 242 | 3" sq. | 4½" | 12"x12"x12" | $ 679.95 |
| MA-550 | 55 ft. | 22' 1" | 3 | 435 | 3" sq. | 6" | 18"x18"x18"' | 1069.95 |
| MA-550MDP* | 55 ft. | 22'1 " | 3 | 620 | 3" sq. | 6" | 3'x3'x5' | 2932.95 |
| MA-770 | 71 ft. | 22'1 0" | 4 | 645 | 3" sq. | 8" | 3'x3'x6' | 2529.95 |
| MA-770MDP* | 71 ft. | 22' 10" | 4 | 880 | 3" sq. | 8" | 3'x3'x5½' | 3999.95 |
| MA-850MDP* | 85 ft. | 23' 6" | 5 | 1128 | 3" sq. | 10" | 4'x4'x6' | 5391.95 |

*Standard bases and eve mounts included with all towers (except MA-770, 770-MDP and 850 MDP
• MDP models complete with heavy-duty motor drive with positive pull down.

## FREE STANDING HEAVY-DUTY CRANK-UP TOWERS

**Will handle 18 sq. ft. antennas at 50 MPH winds.**

| MODEL NO. | HEIGHT MAX. | HEIGHT MIN. | NUMBER SECTIONS | WT # | SECTION OD Top | SECTION OD Bot. | BASE SIZE | AES PRICE |
|---|---|---|---|---|---|---|---|---|
| TX-438 | 38 ft. | 21' 6" | 2 | 355 | 12½" | 15" | 3'x 3'x 5' | $1142.95 |
| TX-455 | 55 ft. | 21' 6" | 3 | 670 | 12½" | 18" | 3'x 3'x 6' | 1399.95 |
| TX-472 | 72 ft. | 22' 8" | 4 | 1040 | 12½" | 21⅛" | 4'x 4'x7' | 2832.95 |
| TX-472MDP* | 72 ft. | 22' 8" | 4 | 1210 | 12½" | 21⅛" | 4'x 4'x7' | 3899.95 |
| TX-489 | 89 ft. | 23' 4" | 5 | 1590 | 12½" | 25⅝" | 4'x 4'x 7' | 4927.95 |
| TX-489MDPL* | 89 ft. | 23' 4" | 5 | 1800 | 12½" | 25⅝" | 4'x 4'x 8⅛' | 7390.95 |

*TX-472MDP includes heavy duty motor drive with positive pull down. TX-489MDPL comes with heavy duty motor drive with dual level wind and positive pull down. MDPL models include fully operational limit switch packages.

## FREE STANDING HEAVY-DUTY CRANK-UP TOWERS

**Will handle 30 sq. ft. antennas at 50 MPH winds.**

| MODEL NO. | HEIGHT MAX. | HEIGHT MIN. | NUMBER SECTIONS | WT # | SECTION OD Top | SECTION OD Bot. | BASE SIZE | AES PRICE |
|---|---|---|---|---|---|---|---|---|
| HDX-538 | 38 ft | 21'6" | 2 | 600 | 15" | 18" | 3'x3'x 6' | $1477.95 |
| HDX-555 | 55 ft | 22' | 3 | 870 | 15" | 21⅝" | 4'x4'x 6' | 2099.95 |
| HDX-572 | 72 ft | 22'8" | 4 | 1420 | 15" | 25⅝" | 4'x4'x 7' | 4434.95 |
| HDX-572MDPL* | 72 ft. | 22'8' | 4 | 1600 | 15" | 25⅝" | 4'x4'x 8⅛' | 6775.95 |
| HDX-589MDPL* | 89 ft. | 23'8" | 5 | 2440 | 15" | 30⅝" | 5'x5'x 8½' | 8869.95 |
| HDX-689MDPL* | 89 ft. | 23'8" | 5 | 3450 | 18" | 37⅛" | 5'x5'x 9½' | 17,135.95 |
| HDX-5106MDPL* | 106 ft. | 24'8" | 6 | 3700 | 15" | 37⅛" | 5'x5'x9½' | 18,647.95 |

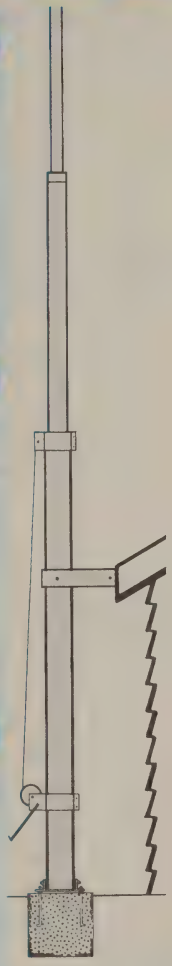
*Includes heavy-duty motor drives with dual level wind and positive pull down. MDLP models include fully operational limit switch packages. *HDX-689MDPL rated 60 sq. ft. of antenna at 50 mph winds. HDX-5106MDPL rated at 35 sq. ft. of antenna at 50 mph winds

## FREE STANDING "LOW-PROFILE" COMPACT CRANK-UP TOWERS

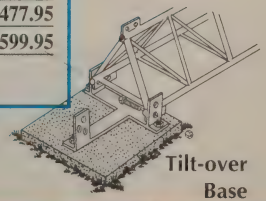
**Will handle 30 sq. ft. antennas at 50 MPH winds.**

| MODEL NO. | HEIGHT MAX. | HEIGHT MIN. | NUMBER SECTIONS | WT # | SECTION OD Top | SECTION OD Bot. | BASE SIZE | AES PRICE |
|---|---|---|---|---|---|---|---|---|
| TMM-433SS* | 33 ft. | 11'4" | 4 | 315 | 10" | 18" | 3'x3'x4' | $1219.95 |
| TMM-433HD | 33 ft. | 11'4" | 4 | 400 | 12½" | 20⅞" | 3'x3'x5' | 1477.95 |
| TMM-541SS | 41 ft. | 12' | 5 | 430 | 10' | 20⅞" | 3'x3'x 4½" | 1599.95 |

* Rotators must be top mounted



THE PRICE LIST HAS A COMPLETE LIST OF ACCESSORIES



Tilt-over Base

**CHECK THE FULL U.S. TOWER CATALOG ON THE FOLLOWING SIX PAGES**

# CRANK-UP TUBULAR TOWERS

## MA SERIES

*The premier MA-Series crank-up Tubular Towers are designed to be both safe and neighbor friendly. The slender design gives a clean, flagpole-like appearance, while allowing for antennas up to10 sq. feet in 50 mph winds. Per EIA Specifications, adequate safety margins are included. Uniform Building Code calculations are available for most models.*

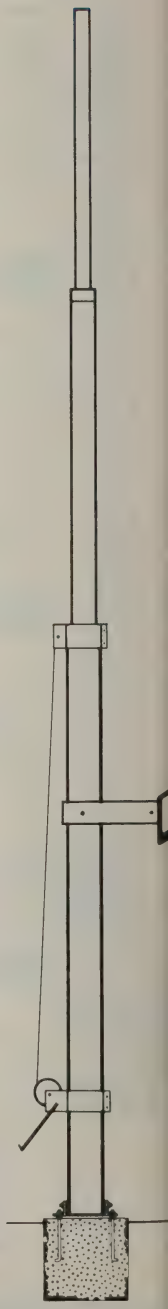
*The MA-40 and 550 models come standard with flat base, two ½" x 10" anchor bolts, wall bracket and rotor plate mounted on top of top section. No guying is required when tower is properly bracketed to the eve of your roof.*

*MA-Series towers are completely self-supporting only when used with accessory MARB or MAB Series bases. The MARB Series rotor base allows the entire tower and antenna to be rotated from the base (rotor not included). This provides for easy rotor maintenance plus emergency hand rotation of the entire tower and antenna.*

*The MA-550MDP, 770MDP and 850MDP models include a heavy duty motor drive with positive pull down. The MDP models provide motorized raising and lowering of the tower. A remote control unit (RMC-1000) accessory is available that allows raising and lowering from your ham shack or other remote location.*

*All models without motor drives come standard with manual hand winches which have load actuated brakes for maximum safety. This feature prevents the winch from free-wheeling and causing injury to you or your installation in the event that you loose your grip during raising or lowering.*

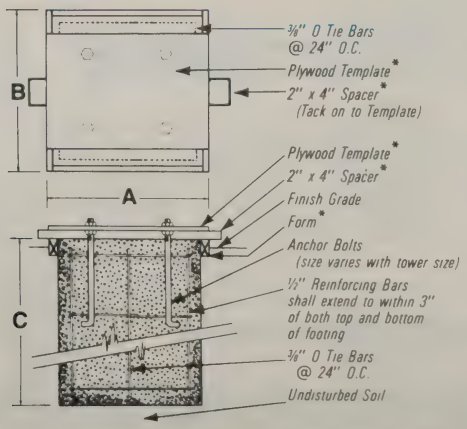
*All steel used at US Tower conforms to ASTM specifications. All welding is done by certified factory personnel. All of our towers are factory tested by trained personnel before leaving the plant.*



**MA-SERIES CRANK-UP MASTS**
Will handle 10 sq. ft. antenna at 50 MPH winds.

| MODEL NO. | HEIGHT MAX. | HEIGHT MIN. | SECTIONS | WEIGHT POUNDS | SEC. O.D. TOP | SEC. O.D. BOT. |
|---|---|---|---|---|---|---|
| MA-40 | 40' | 21'6" | 2 | 242 | 3"sq. | 4½" |
| MA-550 | 55' | 22'1" | 3 | 435 | 3"sq. | 6" |
| MA-550MDP | 55' | 22'1" | 3 | 620 | 3"sq. | 6" |
| MA-770 | 71' | 22'10" | 4 | 645 | 3"sq. | 8" |
| MA-770MDP | 71' | 22'10" | 4 | 830 | 3"sq. | 8" |
| MA-850MDP | 85' | 23'6" | 5 | 1128 | 3"sq. | 10" |

## MA-SERIES BASE INFORMATION




*To be removed after base is installed.

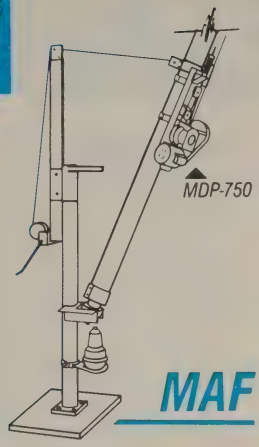
| Model | A | B | C |
|---|---|---|---|
| MA-40 standard flat base | 12" | 12" | 12" |
| MA-550 standard flat base | 18" | 18" | 18" |
| MARB-40 Rotor Base | 3' | 3' | 4' |
| MARB-550 Rotor Base | 3' | 3' | 5'6" |
| MARB-770 Rotor Base | 3' | 3' | 6'6" |
| MARB-850 Rotor Base | 4' | 4' | 6'0" |

Base dimensions may vary with different soil compositions.
Allow ample time for concrete to cure.
MAB and MARB dimensions are the same.

*Rebar is not provided by U.S. Tower. MA 40 & 550 use their standard base as a template. These standard bases use only 2 bolts and require no rebar. Wooden template included with MAB & MARB bases.*

*Because of wide variations throughout the country in zoning requirements and loading conditions (snow, wind, ice, etc.) it is the responsibility of the customer to make certain that his Tower conforms to all applicable codes. We recommend you obtain all necessary permits prior to purchase.*

# MA-SERIES ACCESSORIES



MDP-750

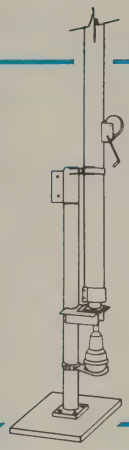
## MAF

| Model | Description | Weight |
|---|---|---|

### MAF Raising Fixture

*MAF-Series Raising Fixture accessory for easy raising and antenna servicing. For use with MARB and MAB bases.*

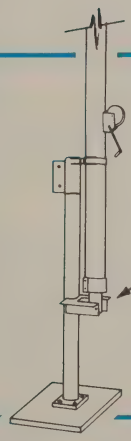
| | | |
|---|---|---|
| MAF-40 | Raising Fixture for MA-40 | 35# |
| MAF-550 | Raising Fixture for MA-550 | 70# |
| MAF-770 | Raising Fixture for MA-770 | 75# |
| MAF-850 | Raising Fixture for MA-850 | 80# |



## MARB

### MARB Freestanding Rotor Base

| | | |
|---|---|---|
| MARB-40 | Freestanding ROTOR BASE for MA-40 with four ¾" x 27" Anchor Bolts and thrust bearing | 75# |
| MARB-550 | Freestanding ROTOR BASE for MA-550 with four 1" x 36" Anchor Bolts and thrust bearing | 140# |
| MARB-770 | Freestanding ROTOR BASE for MA-770 with four 1" x 36" Anchor Bolts and thrust bearing | 195# |
| MARB-850 | Freestanding ROTOR BASE for MA-850 with four 1⅛" x 36" Anchor Bolts and thrust bearing | 280# |



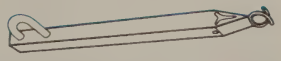
*Hinging allows for easy installation on both MAB and MARB Bases.*

## MAB

### MAB Freestanding Type Base

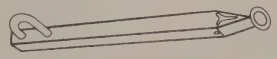
| | | |
|---|---|---|
| MAB-40 | Freestanding hinged base for MA-40 with four ¾" x 27" Anchor Bolts | 55# |
| MAB-550 | Freestanding hinged base for MA-550 with four 1" x 36" Anchor Bolts | 119# |
| MAB-770 | Freestanding hinged base for MA-770 with four 1" x 36" Anchor Bolts | 175# |
| MAB-850 | Freestanding hinged base for MA-850 with four 1⅛" x 36" Anchor Bolts | 180# |

### Coax Standoff Arms



CX

| | | |
|---|---|---|
| CX-2M | Coax Standoff arms for MA-40 | 4# |
| CX-3M | Coax Standoff arms for MA-550 | 6# |
| CX-4M | Coax Standoff arms for MA-770 | 8# |
| CX-5M | Coax Standoff arms for MA-850 | 10# |



IV-16

| | | |
|---|---|---|
| IV-16 | The IV-16 attaches near the top of the tower of your choice to hold inverted vee type antennas. Please designate model tower to be used with. Cannot be used with MARB rotor base. | 5# |

*The factory reserves the right to make changes or modifications without notice.*

### Motor Drives

| Model | Description | Weight |
|---|---|---|
| MD-75 | Heavy-duty motor drive with 1 HP motor and gear box. | 155# |
| MDP-750 | Heavy-duty motor drive with 1 HP motor, gear box and positive pull down. | 185# |

### Remote Control Accessories

| | | |
|---|---|---|
| RMC-1000 | Relay operated remote control for raising and lowering your tower from your ham shack or other remote location. | 18# |
| MCL-100 | Limit switch control package. The MCL-100 includes limit switches, limit switch brackets and control box at the base of the tower. | 7# |

(See page 6 & 7 for complete descriptions.)

## TMM SERIES

***US Tower's*** *latest design includes the compact TMM Series towers giving Hams in restricted areas an alternative. The TMM Series has a minimum retracted height of 11'4" (may vary, depending on rotor used) and a maximum height of 47' including mast. At the towers' retracted height, visual impact is reduced to a minimum and antenna servicing is made easier. Typically the tower and antenna are below the roof line of your home when the tower is fully retracted.*

*The TMM Series towers are lightweight, freestanding crank-up towers that allow up to 18 sq. feet of antenna in 50 mph winds per EIA specifications. The TMM 433HD offers 24 sq. feet. These lightweight towers should provide many years of trouble free service. All of our towers have a hot dipped galvanized finish inside and out.*

*The TMM-433SS and 541SS have a 10" top section which will permit installation of most Alliance and other similiar sized rotors inside the top section. Oversized rotors will prevent full retraction of your tower however they may be used if full retraction is not required. This restriction is dependent on location of rotor plate. All TMM Series towers include anchor bolts, rotor plate, hinged T-base, load actuated winch, and eight feet of 2" OD x .120" antenna mast.*

*The TMM-433SS will accept the MD-75 motor drive accessory. The TMM-433HD and 541SS will accept the MD-75 and MDP-750 accessory motor drives. The MDP-750 motor drive accessory is compatible with both of our MCL-100 and RMC-1000 limit switch packages (see accessories).*

## TX SERIES

***US Tower's*** *freestanding TX Series crank-up towers are as strong or stronger than most competitors' heavy-duty models. The TX Series towers have 21 foot sections with 4 foot overlap to provide extra height and strength. In addition the overlap helps prevent binding while lowering your tower in high wind and conditions.*

*The TX Series towers have a large enough top section (12½") to permit installation of most rotors inside the section for maximum strength while allowing the section to fully retract. Cross bracing at critical points on the tower ensures safety and additional strength. All US Towers crank-up towers have a heavy-duty hot dipped galvanized finish both inside and out, which should provide many years of trouble-free service.*

*The TX Series towers come complete with rotor plate and base hardware which includes, large steel anchor bolts and heavy-duty steel T-base that allows the tower to hinge on for easy installation. All T-bases will accept the TRX Series raising fixtures for easy one man installation. All TX Series towers include Fulton hand winches (except MDP and MDLP models) which feature automatic load actuated brakes for maximum safety. Masts and motor drives are available as accessories (see accessory page).*

*The TX-472MDP comes complete with MDP-750 motor drive and limit switch brackets. The TX-489MDPL includes the MDPL-1000 motor drive and limit switch brackets. Limit switch assemblies and remote raising devices are available (MCL-100) (RMC-1000) for all MDP-750 and MDPL-1000 motor drive units (see accessory page for description).*

*U.S. Tower's TX Series requires no guying. The wind loading is calculated at 18 sq. feet of antenna in 50 mph winds per EIA specifications. To assist you in applying for necessary construction permits, Uniform Building Code calculations are available for most models.*

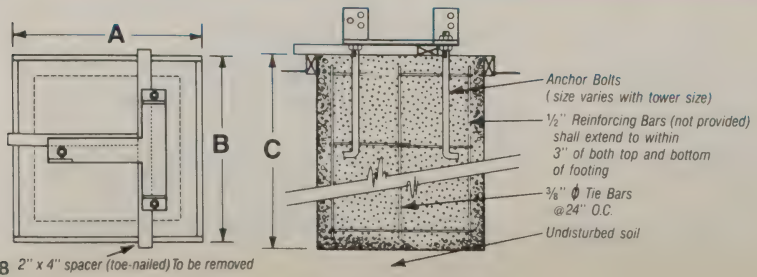
## HDX SERIES

***US Tower's*** *HDX Series heavy-duty crank-up towers have up to 2½ times more windloading capacity than others commonly advertised. This superior strength allows for large stacked arrays, while using our commercial type bases and anchor bolts that can be easily installed and vertically adjusted. All HDX Series T-bases are designed to use our TRX Series raising fixtures which make installations and antenna servicing a one man job.*

*Modified top sections for the HDR-300 rotors are available at a small additional cost. US Tower carries as accessories many different sizes and strengths of masts which can be used with the HDX Series towers. The HDX-572MDPL and 589MDPL motorized towers provide dual level wind, positive pull down and heavy duty gear box features. The HDX-572MDPL comes only with limit switch brackets. The HDX-589MDPL comes complete with the MCL-100, limit switch package. All towers using MDP-750 and MDPL-1000 motor drives may use the RMC-1000 accessory limit switch package which allows the raising and lowering of your tower from the comfort of your ham shack or any remote location. MCL-100 is also available (see accessory page).*

*All HDX Series towers come complete with rotor plate, anchor bolts and heavy-duty T-base (doubles as template). US Tower's special T-base design allows the tower to hinge for easy installation. US Tower's crank towers require no guying. The HDX Series towers are rated at 30 sq. feet of antenna at 50 mph winds per EIA specifications. To assist you in getting a construction permit, Uniform Building Code calculations are available for most towers.*

## CRANK-UP TOWER BASE INFORMATION




| Model | A | B | C |
|---|---|---|---|
| TMM-433SS | 3' | 3' | 4' |
| TMM-541SS | 3' | 3' | 4'6" |
| TMM-433HD | 3' | 3' | 5' |
| TX-438 | 3' | 3' | 5' |
| TX-455 | 3' | 3' | 6' |
| TX-472 | 4' | 4' | 7' |
| TX-489 | 4' | 4' | 7' |
| HDX-538 | 3' | 3' | 6' |
| HDX-555 | 4' | 4' | 6' |
| HDX-572 | 4' | 4' | 7' |
| HDX-589 | 5' | 5' | 7'6" |

# ORTING CRANK-UP TOWERS

*Because of wide variations throughout the country in zoning requirements and loading conditions (snow, wind, ice, etc.) it is the responsibility of the customer to make certain that his Tower conforms to all applicable codes. We recommend you obtain all necessary permits prior to purchase.*

## COMPACT TMM-SERIES CRANK-UP TOWERS

Will handle 18 sq. ft. antennas at 50 mph
(433HD will handle 24 sq.)

| MODEL NO. | HEIGHT MAX. | HEIGHT MIN. | SECTIONS | WEIGHT ROUNDS | SEC. O.D. TOP | SEC. O.D. BOT. |
|---|---|---|---|---|---|---|
| TMM-433SS | 33'w/o Mast | 11'4" | 4 | 315 | 10" | 18" |
| TMM-433HD | 33'w/o Mast | 11'4" | 4 | 400 | 12 ½" | 20-7/8" |
| TMM-541SS | 41'w/o Mast | 12' | 5 | 430 | 10" | 20-7/8" |

## TX-SERIES FREE-STANDING CRANK-UP TOWERS

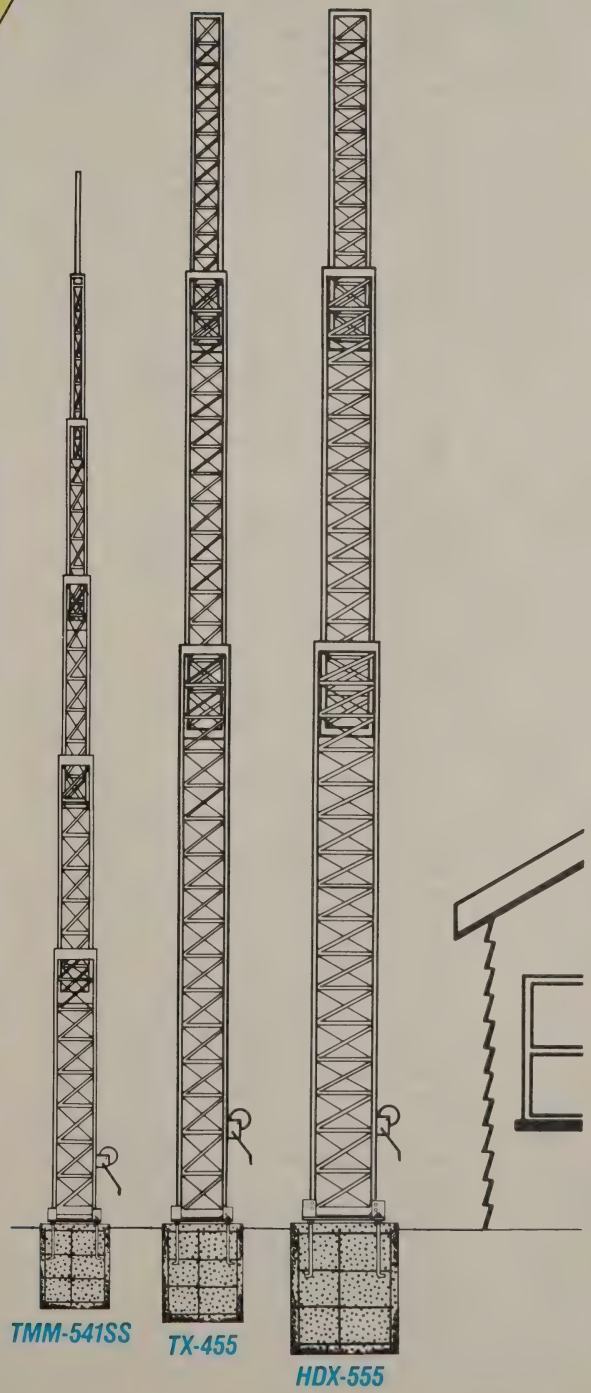
Will handle 18 sq. ft. antennas at 50 mph winds

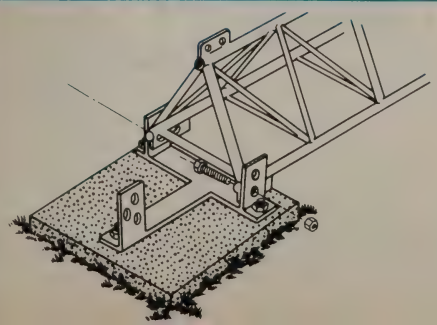
| | | | | | | |
|---|---|---|---|---|---|---|
| TX-438 | 38' | 21'6" | 2 | 355 | 12½" | 15" |
| TX-455 | 55' | 21' | 3 | 670 | 12½" | 18" |
| TX-472 | 72' | 22'8" | 4 | 1040 | 12½" | 21⅝" |
| TX-472MDP | 72' | 22'8" | 4 | 1210 | 12½" | 21⅝" |
| TX-489 | 89' | 23'4" | 5 | 1590 | 12½" | 25⅝" |
| TX-489MDPL | 89' | 23'4" | 5 | 1800 | 12½" | 25⅝" |

## HDX-SERIES HEAVY-DUTY CRANK-UP TOWERS

Will handle 30 sq. ft. antennas at 50 mph winds

| | | | | | | |
|---|---|---|---|---|---|---|
| HDX-538 | 38' | 21'6" | 2 | 600 | 15" | 18" |
| HDX-555 | 55' | 22' | 3 | 870 | 15" | 21⅝" |
| HDX-572 | 72' | 22'8" | 4 | 1420 | 15" | 25⅝" |
| HDX-572MDPL | 72' | 22'8" | 4 | 1600 | 15" | 25⅝" |
| HDX-589MDPL | 89' | 23'8" | 5 | 2440 | 15" | 30⅝" |



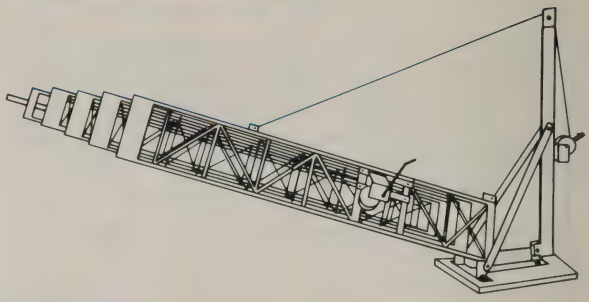
# CRANK-UP ACCESSORIES

| Model | Description | Weight |
|---|---|---|

## Raising Fixture

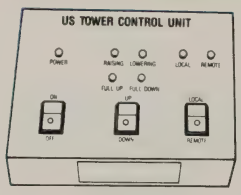
| | | |
|---|---|---|
| TRX-80 | Standard model tower raising fixture for TMM, TX and HDX Series towers. | 120# |
| TRX-80HD | Heavy-duty model tower raising fixture for TX and HDX Series towers. | 155# |

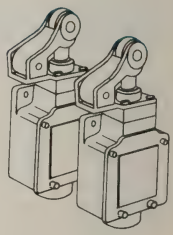
Both TRX-80 and 80HD are designed to be easily mounted on your towers' hinged T-base for quick and safe one man installation or antenna servicing.



## Remote Control

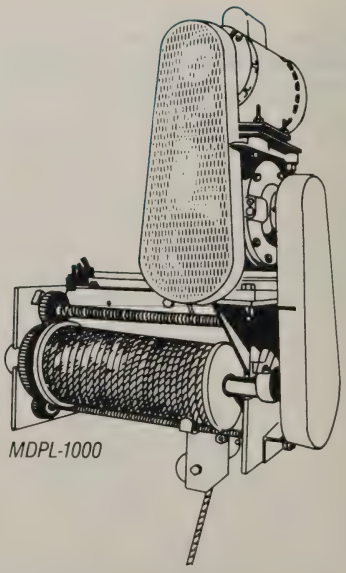
| | | |
|---|---|---|
| RMC-1000 | Relay operated remote control for raising and lowering your tower from your ham shack or other remote location. The RMC-1000 includes, limit switches, limit switch brackets and two relay boxes. The RMC-1000 can only be used with MDP-750 and MDPL-1000 motor drives. | 18# |
| MCL-100 | Limit switch control package. The MCL-100 includes limit switches, limit switch brackets and control box at the base of the tower. The MCL-100 allows you to raise and lower your tower with automatic shut down when maximum or minimum height is reached. The MCL-100 can only be used with the MDP-750 and MDPL-1000 motor drives. | 7# |



## Motor Drives

| | | |
|---|---|---|
| MD-75 | Heavy-duty motor drive with 1 HP motor and gear box. | 155# |
| MDP-750 | Heavy-duty motor drive with 1 HP motor, gear box and positive pull down. US Towers' positive pull down feature is designed to mechanically apply the same strength in the retraction process as is used in the raising of your tower. Positive pull down is very important in lowering your tower in high wind conditions. The MDP-750 differs from the standard motor drive (MD-75) unit which releases tension on the cables allowing the weight of the upper sections to be the only lowering force. (See page 3 for illustration.) | 185# |
| MDPL-1000 | Heavy-duty motor drive with 1 HP motor, heavy-duty gear box, positive pull down and dual level wind features. Dual level wind is an exclusive US Tower design allowing the cable to wind on the motor drum in a uniform manner. This prevents the cable from overlapping on the drum. For description of positive pull down see MDP-750. | 220# |

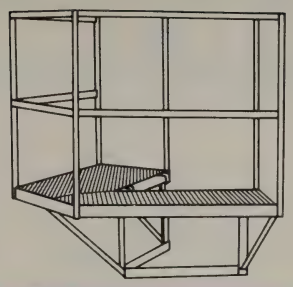


*MDPL-1000*

*Call factory for replacement 1 HP motors, hand winches, limit switches, 3/16" x 7" x 19" and 1/4" x 7" x 19" aircraft cable, anchor bolts, belts, pulleys, sprockets and modified bases. Tower dolley rentals are available. The factory reserves the right to make changes or modifications without notice.*

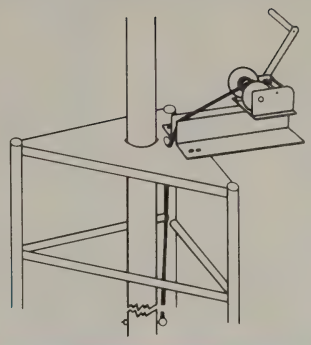
| Model | Description | Weight |
|---|---|---|

## Service Platform



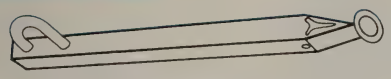
| | | |
|---|---|---|
| HDP | Large service platform with safety railings to provide a safe and comfortable surface while installing or maintaining your antenna and rotor. | 125# |

## Mast Raising Fixture

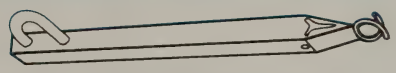


| | | |
|---|---|---|
| MRF | Mast raising fixture with winch and cable that attaches to the top of your tower to assist in raising and lowering your antenna mast. | 20# |

## Coaxial Arm Sets

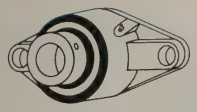


| | | |
|---|---|---|
| IV-16 | The IV-16 attaches near the top of the tower of your choice to hold inverted vee type antennas. Please designate model tower to be used with. Cannot be used with MARB rotor base. | 5# |



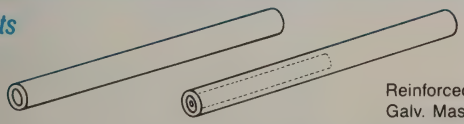
| | | |
|---|---|---|
| CX-2 | Set of 2 Coax Standoff Arms | 6# |
| CX-3 | Set of 3 Coax Standoff Arms | 8# |
| CX-4 | Set of 4 Coax Standoff Arms | 10# |
| CX-5 | Set of 5 Coax Standoff Arms | 13# |

## Thrust Bearing



| | | |
|---|---|---|
| TB-2US | Thrust Bearing for 2" Mast, 2 Flange Holes | 10# |

## Masts



Reinforced Galv. Mast

US Tower offers three different types of masts. The M-5, 10, 15 and 20 masts have .120" wall thickness. The M-15R and 20R have steel pipe inserts in the lower half of the mast which provides extra strength where most needed without adding unnecessary weight in the top portion. The M-15R and 20R have a wall thickness of .250".

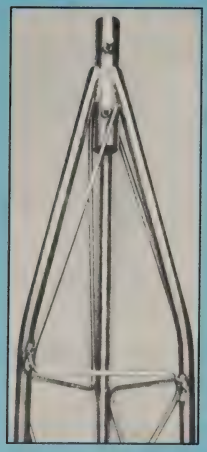
| | | |
|---|---|---|
| M-5 | 2" O.D. x 5 ft. Galv. Mast | 14# |
| M-10 | 2" O.D. x 10 ft. Galv. Mast | 25# |
| M-15 | 2" O.D. x 15 ft. Galv. Mast | 40# |
| M-15R | 2" O.D. X 15 ft. Reinforced Galv. Mast | 50# |
| M-20 | 2" O.D. x 20 ft. Galv. Mast | 55# |
| M-20R | 2" O.D. x 20 ft. Reinforced Galv. Mast | 70# |

| | | |
|---|---|---|
| ¾" x 27" | Anchor Bolt with 2 nuts | 5# |
| 1" x 36" | Anchor Bolt with 2 nuts | 10# |
| 1⅛" x 36" | Anchor Bolt with 2 nuts | 12# |
| RP-3 | Rotor Plate for 10" Section | 5# |
| RP-4 | Rotor Plate for 12½" Section | 7# |
| RP-5 | Rotor Plate for 15" Section | 9# |

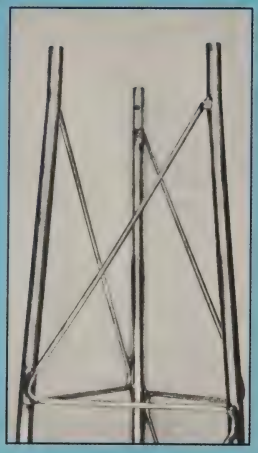
S - Standard
O - Optional

| | TX-438 | TX-455 | TX-472 | TX-472MDP | TX-489 | TX-489MDPL | HDX-538 | HDX-555 | HDX-572 | HDX-572MDPL | HDX-589MDPL | TMM-433SS | TMM-433HD | TMM-541SS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MASTS** | | | | | | | | | | | | | | |
| M-5 | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| M-8 | | | | | | | | | | | | S | S | S |
| M-10 | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| M-15 | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| M-20 | O | O | O | O | O | O | O | O | O | O | O | | | |
| M-15R | O | O | O | O | O | O | O | O | O | O | O | | | |
| M-20R | O | O | O | O | O | O | O | O | O | O | O | | | |
| | | | | | | | | | | | | | | |
| **RAISING FIXTURE** | | | | | | | | | | | | | | |
| TRX-80 | O | O | | | | | O | O | | | | O | O | O |
| TRX-80HD | | | O | O | O | O | | | O | O | O | | | |
| **SERVICE PLATFORM** | | | | | | | | | | | | | | |
| HDP | | | O | O | O | O | | | O | O | O | | | |
| **COAX STANDOFF ARMS** | | | | | | | | | | | | | | |
| CX-2 | O | | | | | | O | | | | | | | |
| CX-3 | | O | | | | | | O | | | | | | |
| CX-4 | | | O | O | | | | | O | O | | O | O | |
| CX-5 | | | | | O | O | | | | | O | | | O |
| **MOTOR DRIVES** | | | | | | | | | | | | | | |
| MD-75 | O | O | | | | | O | O | | | | O | O | O |
| MDP-750 | | O | O | S | | | | O | | | | | O | O |
| MDPL-1000 | | | O | | O | S | | | O | S | S | | | |
| **REMOTE CONTROL** | | | | | | | | | | | | | | |
| RMC-1000 | | O | O | O | O | O | | O | O | O | O | | O | O |
| MCL-100 | | O | O | O | O | O | | O | O | O | S | | O | O |
| **MISCELLANEOUS** | | | | | | | | | | | | | | |
| ¾" x 27" bolts | S | | | | | | | | | | | S | | |
| 1" x 36" bolts | | S | | | S | S | S | | S | S | | | S | S |
| 1⅛" x 36" bolts | | | S | S | | | | S | | | S | | | |
| RP-3 | | | | | | | | | | | | S | | S |
| RP-4 | S | S | S | S | S | S | | | | | | | S | |
| RP-5 | | | | | | | S | S | S | S | S | | | |
| MRF | O | O | O | O | O | O | O | O | O | O | O | | O | |
| TB-2US | O | O | O | O | O | O | O | O | O | O | O | | O | |
| | | | | | | | | | | | | | | |
| IV-16 | O | O | O | O | O | O | O | O | O | O | O | O | O | O |

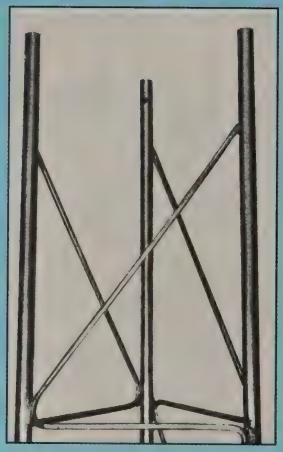
# UNIVERSAL TOWERS



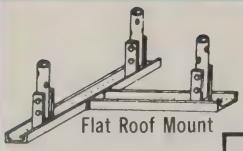
TOP SECTION



TAPER SECTION

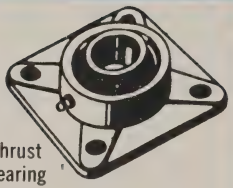


STRAIGHT SECTION



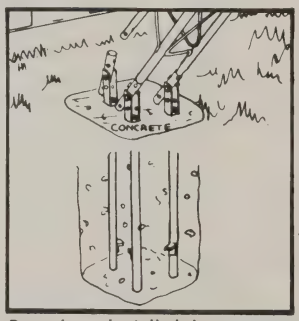
Flat Roof Mount

Rotor Plate



Thrust Bearing

Base Legs




Base Legs installed in concrete showing Hinge-Over feature.

Top Section with Thrust Bearing Plate

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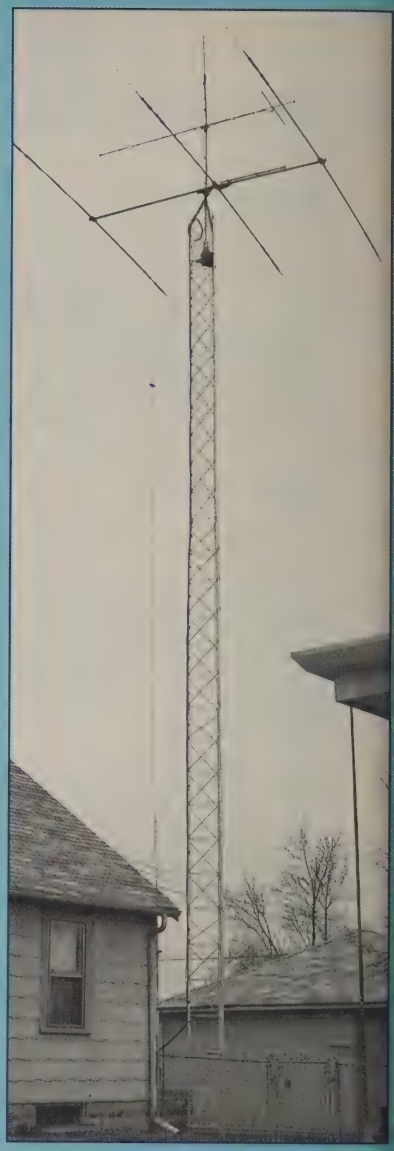

Here's a 50 ft. **UNIVERSAL Self-Supporting Aluminum Tower** installed at the QTH of Ted Willett W9NHE. This set up made a **BIG DIFFERENCE** — he really gets out!

Before you buy a tower consider the advantages of Aluminum — it's Strong, Lightweight, Rust Free and easy to assemble and erect.

**UNIVERSAL** offers 10 ft. sections or complete towers ranging from 30 to 100 ft. with a choice of wind load ratings and accessories to meet your specific needs.

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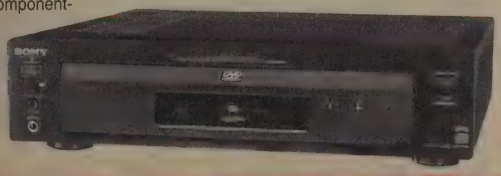

**AUDIO PLUS** is the Consumer Electronics Division of AMATEUR ELECTRONIC SUPPLY® with 2 locations: the Main Store in Oshkosh, WI and Satellite Store in Fond du Lac, WI

AUDIO PLUS Headquarters - Oshkosh, WI

Paul Nickolai, Assistant Manager and Don Ladwig, General Manager

Store area showing the front counter and Digital Satellite display

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## AUDIO - VIDEO RECEIVERS

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✦ Digital Signal Processor with three acoustic environments ✦ 80W per channel x 2, 8Ω 20-20,000Hz, 0.09% ✦ 80W/channel x 3, 8Ω 1,000Hz, 0.8% ✦ Surround 80W, 8Ω 1,000Hz, 0.8% THD ✦ Dolby™ Pro-Logic® surround decoding ✦ AV system remote control

### DE-605
**DSP A/V RECEIVER**

✦Digital Signal Processing with 12 acoustic environments ✦ 100W per channel x 2, 8Ω 20-, 20,000Hz, 0.09% ✦ 100W per channel x 3, 8Ω 1,000Hz, 0.8% THD ✦ Surround 50W per channel x 2, 8Ω 1,000Hz, 0.8% THD ✦ Dolby® Pro-Logic® surround sound decoding ✦ 4Ω/8Ω switch ✦ Soundfield link ✦ A/V system remote controls

### DE-805
**VISIONTOUCH™ RECEIVER**

✦ Visiontouch™ joystick point-and-click remote control ✦ On-screen graphic displays of A/V system status ✦ 120W per channel x 2, 8Ω or 4Ω 20-20,000Hz, 0.09% ✦ 120W per channel x 3, 8Ω 1,000Hz, 0.8% ✦ Surround 50W per channel x 2, 8Ω ,1000Hz, 0.8% THD ✦ Digital Signal Processing with 12 acoustic environments Dolby® Pro-Logic® surround sound decoding ✦ S-link™ control bus for A/V system convenience ✦ Front A/C input

### STRGA8ES
**VISIONTOUCH™ RECEIVER**

✦120W per channel x 3, 8Ω/4Ω 20-20,000Hz, 0.05% ✦ Surround 50W per channel x 2. 8Ω 1,000Hz, 0.8% THD ✦ Digital signal processing with 24 acoustic environments ✦ Dolby® AC-3™ decoder ready ✦ Digital Parametric Equalizer ✦ Digital Dolby® Pro-Logic® surround sound decoding ✦ Programmable remote control

### STRGX700ES
**DSP RECEIVER**

✦ 70W/channel x 3, 8Ω /4Ω , 20-20,000. 0.15% THD ✦ Surround 25W per channel x 2, 8Ω 1,000Hz, 0.8% THD ✦ Digital Signal Processing with 5 acoustic environments ✦ Dolby® Pro-Logic® decoding for surround sound ✦ Audio/Video Unicommander™ remote control

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## CD PLAYERS

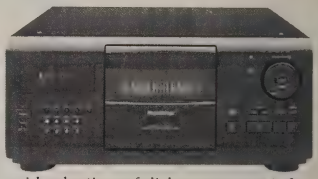
### CPD-CA7ES
**CAROUSEL 5-DISC CHANGER**

✦ Play 1, exchange 4 capability ✦ Full feed forward digital filter ✦ 8-output High Density Linear Converter™ system ✦ Six replay modes, six repeat modes ✦ Remote Commander™ wireless remote control ✦ Optical digital output

### CDP-CE505
**CAROUSEL 5-DISC CHANGER**

✦ Play one, exchange 4 capability ✦ Hybrid pulse D/A converter ✦ Custom File™ memory for 172 disks ✦ Digital Volume control ✦ S-Link™ connector for use with compatible Sony receivers ✦ Remote Commander™ wireless remote control.

### CDP-CX200
**200-DISC CHANGER**



✦ Internal storage for 200 disks ✦ Custom File™ block file organizes your CDs into 8 areas that you define and name ✦ S-Link™ connector for use with compatible Sony receivers ✦ Jog dial for rapid selection of disks or memo information ✦ Hybrid Pulse D/A converter for exceptional sound ✦ 10-key Direct Access™ Remote Commander® remote control

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## SONY DIGITAL SATELLITE SYSTEM

SONY'S new Digital Satellite System opens the gateway to a New World of Entertainment. As a DSS owner, you will have access to up to 175 channels of Music, Sports and Movies depending on the programming package you select. This new technology now brings Digital Picture Quality (over 500 lines of resolution) and CD Quality Sound to your home via a dish that is less than 19" in diameter.

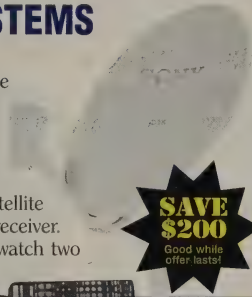
## YOUR CHOICE OF 3 DSS SYSTEMS

### SAS-BS2

**Basic System includes:** Satellite Antenna, Digital Satellite Receiver & Remote Control. Allows hook-up of 1 TV and 1 VCR or 2 TV's (both TV's would be tuned to the same channel and controlled by the single receiver)

### SAS-BD2

**Dual Output system.** This system includes an advanced Satellite Antenna that gives you the ability to add an optional second receiver. With this system and an additional receiver, you will be able to watch two different channels from 2 different locations.



SAVE $200 Good while offer lasts!

### SAS-AD2

Similar to the dual-output system previously described, with several advanced features. **Multi-event programmable timer:** lets you program your DDS receiver to turn on, select the channel and automatically turn off the unit so you can record shows on you VCR even when you're not home. **Advanced UHF remote** to control your receiver even if hidden in a cabinent or stored in another room!

### THINGS YOU NEED TO KNOW...

✦ The DSS dish must be mounted facing South in order to work. ✦ Roof mounting is not possible if trees or buildings obstruct the southern view. DSS needs a clear line of sight. ✦ Your local community may have restrictions on satellite antennas. ✦ Permission may be needed from the building owner if you live in anything other than a single family residence. ✦ DSS may be viewed on more than one TV and two different channels at once with additional equipment (ask about options!) ✦ DSS programming is a subscriber service, in addition to or instead of regular Cable TV. Call Audio Plus for details! ✦ DSS does not broadcast local affiliates of the major networks such as CBS, NBC, ABC and Fox, therefore a TV antenna may be needed for local area reception.

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This Sony gives you high-performance features and functions: ✦ Hi8™ Format ✦ Hi-Fi Stereo Sound ✦ Worry-Free Recording™ System ✦ SteadyShot® Stabalization ✦ LaserLink™ Wireless Connection System ✦ 5-Head Recording System ✦ Precision 30x Digital Zoom

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**Step-Up Features from CCD-TRV72**

✦ 4" SwivelScreen™ Color LCD Monitor

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# SuperFest '97 – Third Success!

On May 2nd & 3rd, AES® sponsored it's 3rd in-house Superfest event.

Participating were sales & technical representatives from the leading Ham Radio Manufacturers. They set up in traditional hamfest fashion and showed-off their latest equipment, creating a *Dayton-style* atmosphere inside of the spacious AES facility in Milwaukee.

Over 1,000 attendees from the surrounding states found plenty to see and talk about with the representatives. Many area clubs and repeater groups were represented and a Volunteer Examiner Team conducted testing sessions which produced a number of new Hams. Gordon West put on another fabulous show and several forums were conducted on various topics by other industry experts.

Featured were drawings for over 100 donated prizes, including two Grand Prizes worth over $1,000 each. Again, people commented that they liked the chance to go one-on-one with the industry's leading Ham Radio experts which included:

ADI/PREMIER • AMATEUR RADIO TRADER • ARRL/QST • ALINCO • AMERITRON • ALPHA DELTA/OUTBACKER • AZDEN • BENCHER/BUTTERNUT • CQ • COMET/NCG • CUSHCRAFT • DIAMOND/RF PARTS • GLEN MARTIN ENGINEERING • GRUNDIG • GORDON WEST • HAL • HEIL SOUND • HYGAIN/TELEX • ICOM • KANTRONICS/RF CONCEPTS • KENWOOD • LARSEN • MFJ • MIRAGE • POLYPHASER • RF LIMITED • SGC • STANDARD RADIO • TIMEWAVE/AEA • UNIFIED MICROSYSTEMS • VALOR/PRO-AM • VECTRONICS • YAESU

Signing up for the Prizes ... Over 100 donated by Manufacturers & AES

Cruising the Displays ... Over 40 set up in the AES facility!

Checking out the latest stuff, up close!

Expert advice from Gordon West WB6NOA

Brad Thomas KC1EX – ARRL/QST Magazine

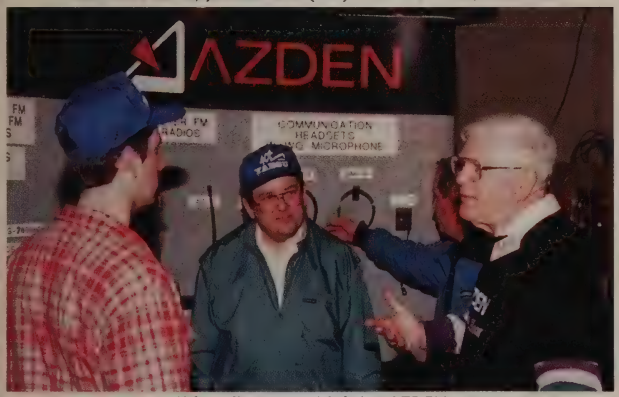
Evelyn Garrision WS7A & Taka Nakayama KW6I – ALINCO

Jim Burns W4ILP, Shan Burns & Don Tyrell W8AD – ALPHA DELTA/OUTBACKER

Barbara Patterson – Amateur Radio Trader

Richard Stubbs, Jr. KC5NSZ (left) – AMERITRON/MIRAGE

MIRAGE Display



Sid Wolin K2LJH (right) – AZDEN

Jennifer Sexton (left) – BENCHER/BUTTERNUT

Mick Stwertnik KB6JVT (left) – NCG/COMET ANTENNA

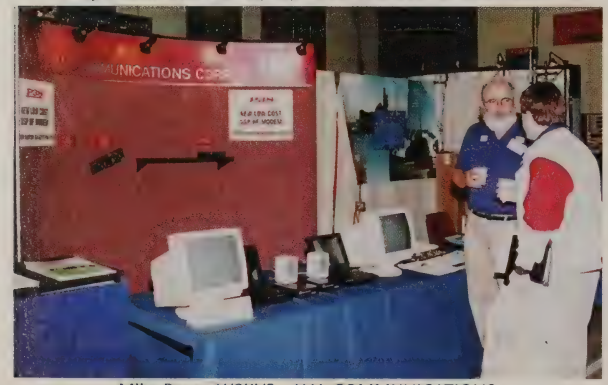
Ken Albertson KA1VMR (left) – CUSHCRAFT

Arnie Sposato N2IQO (right) – CQ COMMUNICATIONS

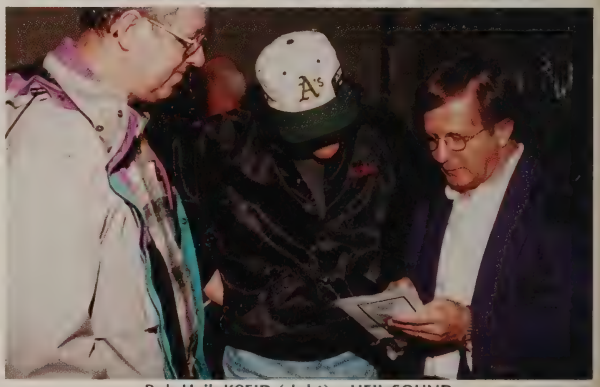
Sam Lewis, Jr – DIAMOND ANTENNA/RF LIMITED

Gary Martin WB0WMQ (left) – GLEN MARTIN ENGINEERING

Gordon West WB6NOA – GORDON WEST'S RADIO SCHOOL



Mike Broga W9KVF – HAL COMMUNICATIONS

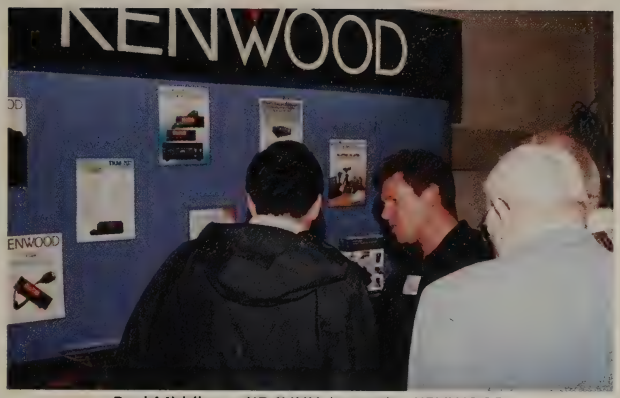


Bob Heil, K9EID (right) – HEIL SOUND

Clyde Blyleven, WA6ONZ (center) – HYGAIN

Jim Newcomb, N7MBA (left) – ICOM

Phil Anderson WØXI (right) – KANTRONICS/RF CONCEPTS




Paul Middleton KD6NUH (center) – KENWOOD

Gregg Starr (left) – MAGELLAN SYSTEMS

Martin F. Jue K5FLU (left) – MFJ/AMERITRON/MIRAGE/VECTRONICS

Charles Chueh (left) & associate – MAHA COMMUNICATIONS

Bob Wanderer AAØCY (left) – POLYPHASER & Dave Barquist K9PAK – LARSEN

Ken Collier KO6UX (center) & Henry Liou – ADI/PREMIER

Bob Gregg AB6CH (right) – SGC

Roger Wayman W9GG (right) – STANDARD RADIO

Al Caplan W0RIC (center) – TIMEWAVE TECHNOLOGY, INC/AEA

Ken K9EN – SMOKE SIGNALS & Gary Sutcliffe W9XT UNIFIED MICROSYSTEMS

Bob White (left) VALOR/PRO-AM

Richard Stubbs, Jr. KC5NSZ – VECTRONICS

Rico Burgos KC6FMM (left) & Chip Margelli K7JA – YAESU

Gordon West WB6NOA – Conducting his show!

SuperFest VE Team – Milwaukee Radio Amateurs' Club

Ernie, K1HO

**Ernest Smith, K1HO – a member of the sales staff at Orlando, has had a very interesting career. In 1985, he was the Radio Officer aboard the Woods Hole Oceanographic Institution's *R/V Knorr*, the vessel that located the *Titanic*, south of St. John's, Newfoundland, at a depth of 12,500 feet.**

*Ernie relates:*

"We arrived on the search site at approximately 2200 GMT on August 24th, 1985. There was a feeling of excitement, and at the same time a feeling of sadness among crew and scientists, realizing that this was the location of the great *Titanic* disaster. From a Radio Officer's point of view, I tried to visualize what the Chief Marconi Operator of the *Titanic*, Jack Phillips, and his assistant, Harold Bride, had gone through years ago on this exact location.

The first thing I did via radio was to verify the International Ice Patrol data on how far we were from the ice. Fortunately, the closest icebergs were more than 200 miles to the north, and we were in the clear. The weather was overcast with a slight drizzle and the temperature was around 67°F. Seas were 5 to 7 feet and seemed to calm somewhat after our arrival. Our video camera sleds were deployed and a methodical search pattern was started.

After 7 days of intensive search, the *Titanic* was located at 0405 GMT on September 1, 1985, over 73 years after she struck the iceberg and sank. Most of the people on board the *Knorr* were off duty when the find occurred. I was soundly asleep in my stateroom adjacent to the radio room. It was only a matter of minutes after the discovery that I was called on the ship's telephone by Captain Richard Bowen, who told me the news. By then almost everyone was awake; the crew, scientists and technicians all were wild with excitement. A few minutes after the discovery, Robert Ballard (co-Chief Scientist) assembled a group on the fantail of the *R/V Knorr* where he raised the *Titanic's* builders' flag and then held a brief memorial service, remembering those who had perished on that tragic night. It was a very touching moment, one that I will always remember.

From that moment forward, the traffic through the radio room increased tremendously. Something on the order of 100 commercial radio telephone calls, 40 radio telegraph messages, 81 HAM radio phone patches (calls) via Gil Geitner (W4LLA), and numerous calls from coast stations with traffic were handled.

Interviews with Robert Ballard were conducted via ship's radio with David Hartman of "Good Morning America," Peter Jennings of "The ABC Evening News," Tom Brokaw of NBC, Maria Schriver of "The CBS Morning News," Terry Drinkwater of CBS, and Walter Sullivan, science writer for *The New York Times*.

To handle the calls continuously coming in, I had to start a list. Ballard would then return calls when he was able to. Helicopter operations had to be coordinated via the radio room between Captain Bowen and the helicopter operations center in St. Johns. Between these calls, the French scientists on board were quite often on the radio to France. When time permitted, I would attempt to catch up on my radiotelegraph traffic."

In addition to his shipboard radio duties, Ernie always ran phone patches on 20 meters via the Maritime Mobile Net for the ship's personnel and scientists. Originally he used Swan rigs, then a Kenwood TS-430 and TS-520 with a Collins 30L-1 linear.

Ernie ended his sea going career after 29 years as a radio operator on a variety of ships. Besides the *Knorr* experience, he has a treasure of stories to tell about his experiences on the high seas.

Ernie has been a Ham since 1954 and holds an Extra Class license. He's active on 20 CW with a Kenwood TS-450S/AT and GAP vertical. He hangs out around 14.030 MHz where he coasts along 45–50 wpm. If you hear him, give him a call!

Ernie is married and has three daughters. His other passion is golf, and he's a certified SCUBA diver.

## Checking out the Phase 3D Amateur Radio Satellite

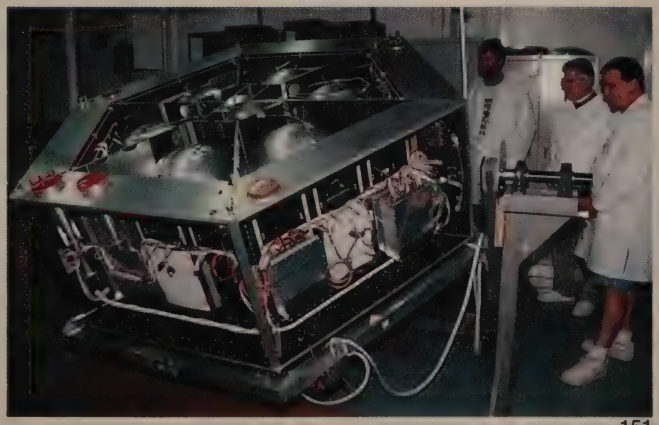
After attending the Orlando Hamfest, Ray Grenier K9KHW & Rick Wadekin N9PMR, from AES Milwaukee, had a chance to visit the AMSAT assembly facility. Pictured is Ray (center) with Brad Thomas KC1EX (left) from the ARRL, and a member of the AMSAT team.

We were allowed to actually go inside of the "clean room", to take close-up look. It was an incredible experience! It is hard to imagine that this "mother" of all Ham radio projects is being designed and hand-assembled by a small core of AMSAT engineers, along with a support group of volunteer Hams, and only with donated funds!

Phase 3B is the largest most complex international hamsat project to date and will revolutionize Ham satellite communications as we know it. Launch, via Ariane 5 rocket, is scheduled for sometime in September.

The projects' costs continue to escalate and they're experiencing a shortfall in funds. AES, this year, contributed $1,000 to AMSAT and urges the readers of this catalog to make whatever donation they can to this worthwhile project. **AMSAT Web site:** http://www.amsat.org.

**Address:** AMSAT – 850 Sligo Ave; Silver Spring, MD 20910
**Phone:** (301) 589-6062



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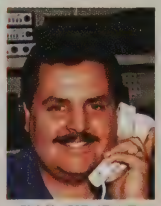

Eddie KD4RAZ

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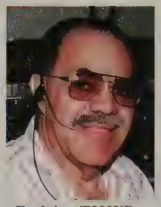
**¡Ningún pedido es demasiado grande o chico!**

Marcial NP4XB



Rodrigo TI2WD

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**e-mail**
**export@aesham.com**
**www**
**http://www.aesham.com**

Charity

*Some Helpful Abbreviations*
**ABREVIACIONES IMPORTANTES**

| | |
|---|---|
| AMP | Amplificador |
| ANT | Antena |
| AT | Acoplador automatico de antena |
| BATT | Batteria |
| BKT | Braket de montura |
| BPR | Guarda choque |
| CGR | Cargador |
| CIG | Conector cigarillo |
| CNTR | Contador |
| DB | Decibeles |
| DLX | Lujo |
| DPLX | Duplexador |
| EL | Elemento |
| FREQ | Frequencia |
| GND | Tierra |
| GTR | Labio de ventana |
| HT | Radio de mano |
| HVY | Pesado |
| KYR | Llave |
| MA | Miliamperes |
| MAG | Magnetico |
| MAINT | Mantemiento |
| MIC | Microfono |
| MT | Montura |
| MTG | Montura |
| NMO | Montura Motorola |
| PROG | Programable |
| PS | Fuente de poder |
| PWR | Poder |
| RCVR | Receptor |
| REM | Remoto |
| SENS | Sensitividad |
| SPKR | Bocina |
| SPLX | Simplex |
| SYS | Sistema |
| TKB | Teclado de botones |
| VOL | Volumen |
| W/ | Con |
| WPM | Palabras por minuto |
| XCVR | Transceptor |

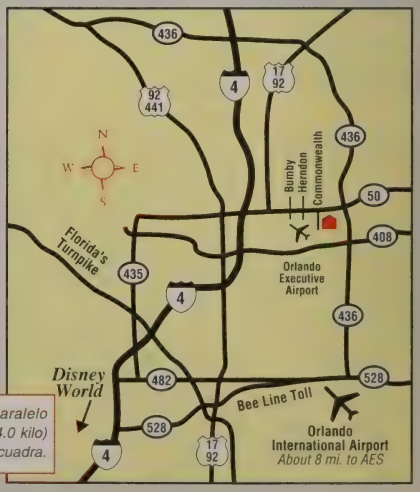
Para Contactar:

**AMATEUR ELECTRONIC SUPPLY® • 621 Commonwealth Avenue, Orlando, Florida 32803, EUA**
*Tel.* 1-407-894-3238; *Toll Free* 1-800-327-1917; *Fax* 1-407-894-7553; *Internacionales* **1-407-898-1166**

**Forma de pago:** El pago que se prefiere es por transferencia de fondos. No se aceptan giros bancarios internacionales. Las tarjetas internacionales de crédito se aceptan únicamente en nuestros salones de venta. Nuestra dirección para la transferencia de fondos es: Barnett Bank of Orlando, Fashion Square Branch, Orlando, Florida. Routing #063103193, para crédito a Amateur Electronic Supply – Acct. #1300009536.

**Método de envío:** El envío se hará de acuerdo con sus instrucciones. Si UD. no las indcia AES hallará el método más adecuado.

**Garantía:** La fábrica garantiza sus equipos únicamente dentro de los Estados Unidos. Si su equipo necesitara reparación debe devolverlo a AES con una copia de la garantía y de la factura dentro del plazo autorizado por el fabricante. AES se reserva el derecho de reparar o substituir el equipo que no funcione como diseñado por razones que no resultaron por daño durante el envío. Al recibír el equipo que no funcione o por defectos debe notificarse a AES antes de los 10 días después de recibido. El equipo debe empacarse en la caja original usando los materiales de empaque originales. **El costo del envío, tanto de ida como de vuelta, es por cuenta del cliente.** Los precios y garantías pueden cambiarse sin previo aviso. Algunos productos no pueden ser exportados a ciertos países de acuerdo con las legislaciones locales.




*I-4 este hasta la salida 41 (Amelia) continuar paralelo hasta Colonial Dr. Doblar a la derecha 2.6 millas (4.0 kilo) hasta Commonwealth Ave. doblar a la Derecha 1/2 cuadra.*

# All Roads Lead to AES®...

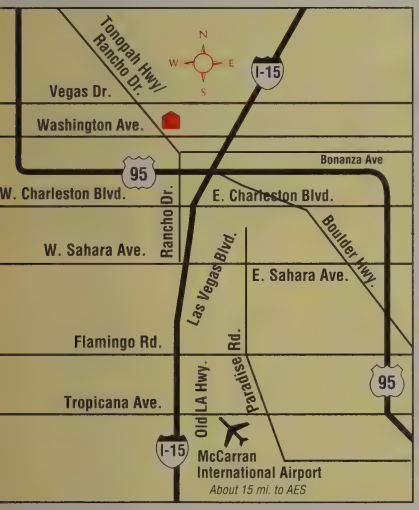
**MILWAUKEE, Wisconsin – Headquarters**
5710 W. Good Hope Road • Milwaukee, WI 53223 • 414-358-0333 • 1-800-558-0411

**Branch Stores**

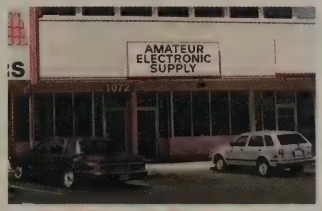
| WICKLIFFE, OH | ORLANDO, FL | CLEARWATER, FL | LAS VEGAS, NV |
|---|---|---|---|
| 28940 Euclid Avenue | 621 Commonwealth Ave. | 14100 U.S.19 N. Unit 124 | 1072 N. Rancho Drive |
| Wickliffe, OH 44092 | Orlando, FL 32803 | Clearwater, FL 34624 | Las Vegas, NV 89106 |
| 216-585-7388 | 407-894-3238 | 813-539-7348 | 702-647-3114 |
| 1-800-321-3594 | 1-800-327-1917 | 1-888-226-7388 (Toll Free) | 1-800-634-6227 |

*Hours:* Monday – Friday 9:00 A.M. - 5:30 P.M. • Saturday 9:00 A.M. - 3:00 P.M.

◀ **Milwaukee, Wisconsin – Headquarters** 5710 W. Good Hope Road



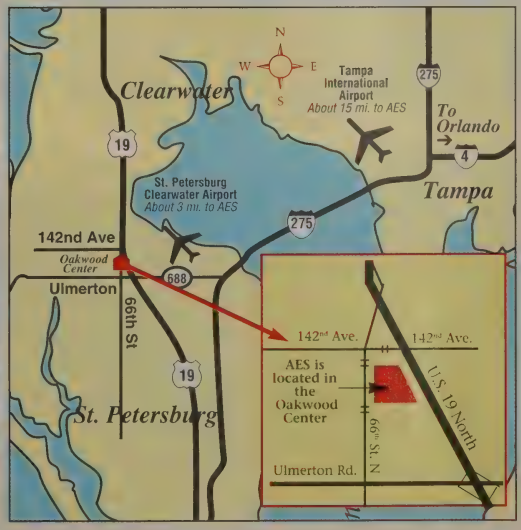
**Wickliffe, Ohio** ▶
28940 Euclid Avenue




◀ **Las Vegas, Nevada**
1072 N. Rancho Drive

◀ **Orlando, Florida**
621 Commonwealth Avenue

**Clearwater, Florida** ▶
14100 U.S.19 N. Unit 124



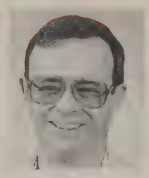
# SOME of the AES® Team – we're just a Phone Call Away!

**AES® MILWAUKEE Wisconsin**
414-358-0333
1-800-558-0411

DALE N9BRX MGR

DICK KE9QU

GARY L. KA9YTB


GARY S. W9NR

ERV N9XRT

JEFF N9EDQ

JARED KB9LTV

JOHN AB9G

MILES K9HMQ

MIKE N9LBQ

PAUL W9KHO

RAY K9KHW

RICK N9PMR

RON WA9VRY

SKIP KB9PBQ

TOM N9UUJ

**AES® WICKLIFFE Ohio**
216-585-7388
1-800-321-3594

BEN AA8AH

BOB WB8WEN

DAVE WB8BAG MGR

ED N8FIN

JOHN WA8PKB

PHIL WD8AAN

**AES® ORLANDO Florida**
407-894-3238
1-800-327-1917

BRUCE WD4HIM

Hablo español

CHARITY KF4RQY

Hablo español

EDDIE KD4RAZ

ERNIE K1HO

GIL K4ISK

GRANT K4IQW MGR

Hablo español

RODRIGO TI2WD

Hablo español

MARCIAL NP4XB

STUART N4IPX

**AES® CLEARWATER Florida**
813-539-7348
1-888-226-7388

DAVE AB4ZR

LEN K4BDP

Español & German

VICTOR N4COU

TERRY W9DIA
Founder

YOUNG TERRY
*(King of Traders 1962)*

**AES® LAS VEGAS Nevada**
702-647-3114
1-800-634-6227

BOB KG7D

LUKE KK7BW

MEL N6SJQ

SQUEAK AD7K MGR

STEVE NM7J

TOM N7GBJ

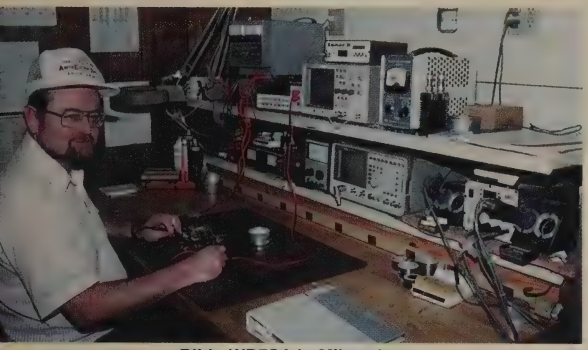
## *Giving Back to the Ham Community...*

AES constantly provides the facility and training for new Hams, using an efficient three-session entry-level training program. At the end, testing is administered by a V.E. Team from the Milwaukee Radio Amateurs' Club. This combination continues to produce a steady stream of new Hams into the hobby.

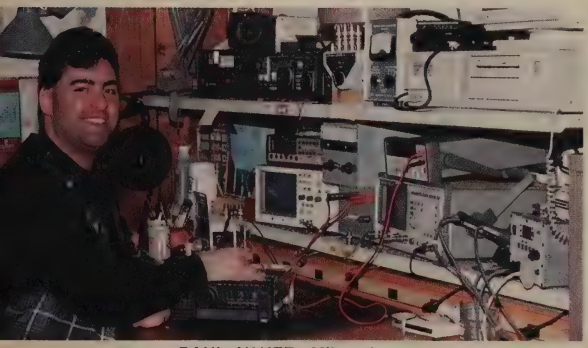
AES has provided the organization and facilities for a number of popular Kantronics Digital Seminars, conducted by Phil Anderson WØXI. So far, there have been three well attended sessions in Milwaukee, one each in Orlando and Wickliffe (pictured above). A Las Vegas session is scheduled for later this year.

# Our Service Department... a Great Reason to Buy your Ham Gear from us!

MILES, K9HMQ • Milwaukee



BILL, WB7SAJ • Milwaukee



PAUL, N9KEZ • Milwaukee

## WE'RE A FULL SERVICE DEALER!

Unlike other Dealers, when you purchase a New Radio from us, our Service Department is able to provide you with Outstanding Technical Service and assistance.

If you have a problem, we are determined to keep you on the air! To do this, we offer Priority Warranty Service on ALL New Radios that we sell. You can be assured that if your New Radio fails within 10 days after receiving it, it will be repaired promptly, or we'll replace it! If a failure occurs after the 10 day priority period, it will be repaired under our "Warranty Repairs First" policy, which will get you back on the air with minimum delay.

**TECHNICIANS** • We have 7 full-time and 4 part-time technicians. Three are shown in their shops in Milwaukee. Also pictured are: John, WA8PKB in Wickliffe, OH; Gil, K4ISK & STUART, N4IPX in Orlando, FL and Bob, KG7D in Las Vegas, NV.

**EXPERIENCE** • Our technicians are all Factory-Trained on the major brands (ALINCO, ICOM, KENWOOD, YAESU) and others. They have more than 70 years of cumulative experience in the ham service field and are FCC and NABER certified.

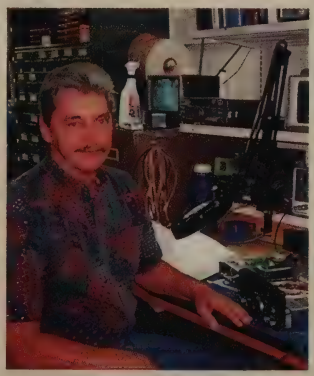
**WE'RE EQUIPPED TO DO THE JOB!** • Each shop uses a state-of-the-art Hewlett Packard 8920A test set, which replaces several pieces of conventional test equipment. It combines twenty-two different instruments including a spectrum analyzer, tracking generator, digital scope, distortion and SINAD meter, all mode signal generator, frequency counter and more! It's highly stable, very accurate and helps speed repairs because it's I-BASIC computer allows the technicians to store custom test parameters for equipment that they frequently service. We also use H-P's digital scopes and DVM's, plus we have the latest in high-tech soldering stations for accurate and time-saving work on the latest delicate surface mount technology

**REPAIRS** • Whether you purchased from us or not, we can extend our Professional Technical Service to your "out of warranty late model ham gear. This is on a time available basis, and provided that service parts are still available. To make arrangements, call the our Service Department in Milwaukee at 414-358-0333; ask for Miles.

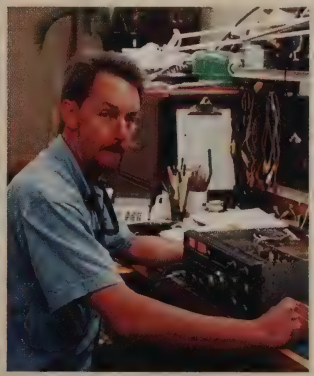
**LABOR RATES** • Our rate for Out-of-Warranty Service is $54.00 per hour. Note: There is a $72.00 minimum charge for service on HF/VHF Base Stations, and a $54.00 minimum charge on VHF Mobiles and Handheld transceivers. Call 414-358-4087

**POLICIES AND OTHER INFORMATION** • See Index for our Policies, Warranty Information and Telephone Numbers of the Major Manufacturers.

JOHN, WA8PKB • Wickliffe



GIL, K4ISK • Orlando



STUART, N4IPX • Orlando

BOB, KG7D • Las Vegas

# AES® has the World's Largest Ham Radio inventory ... including accessories!

## NO NEED TO SHOP AROUND, WE MAKE IT EASY!

★ Huge Inventory of Major items and all related Accessories
★ Knowledgeable Salespersons ★ Outstanding Mail Order Service
★ Toll Free Lines at all locations ★ BBS, E-mail & Web Site
★ Service Department ★ Major Credit Cards ★ Gift Certificates ★ More!

**SAME DAY ORDER PROCESSING** – When You Need It ... Its' There!

**FLAT RATE SHIPPING via UPS GROUND in the LOWER 48 STATES**

| AMOUNT OF ORDER | SHIPPING CHARGES |
|---|---|
| Up to $100.00 | $4.95 |
| $100.01 to $500.00 | $9.95 |
| $500.01 to $1,499.99 | $14.95 |
| $1500.00 & UP | PREPAID |

*Flat Rate Does Not Apply To Drop Shipments*

**The Flat Rate Advantage – No Penalty for Number of Cartons or Weight !**

**IMPORTANT INFORMATION**

1. Shipping charges are based on the Order Total at the time of the initial shipment. Changes made to a partially shipped order will not affect the shipping charges.
2. The order amount on which charges are determined is pre-coupon and pre-tax.
3. 2nd and 3rd shipments (back-orders) are shipped PREPAID at AES® expense via UPS Ground Service, only).
4. COD fees are not included. Add $6.50 per carton.
5. The Shipping Charge includes adequate insurance.
6. Other UPS methods (Red, Blue & Orange), RPS, Priority Mail, Parcel Post and Federal Express are charged at Regular Rates without any credit for UPS ground rates.
7. Questions? – Check with your salesperson when ordering.

*50,000 sq. ft Warehouse in Milwaukee, WI.*

*Most orders Picked and Packed for Same Day Shipment!*

## Gift Certificates - Let 'em make the Choice!

AMATEUR ELECTRONIC SUPPLY
5710 W. GOOD HOPE ROAD.
MILWAUKEE, WISCONSIN 53223
(414) 358-0333

NO.

DATE _____ 19___

THIS CERTIFICATE ENTITLES _____

TO MERCHANDISE VALUED AT _____ DOLLARS $_____

PRESENTED BY _____

AUTHORIZED SIGNATURE

**Can't decide what to give that favorite Ham Operator on a Birthday, Anniversary, Holiday, or Special Day?**

We have Gift Certificates and a selection of over 6,000 Major items and Accessories to choose from.

Certificates may be purchased from our Milwaukee store by calling:

**1-800-558-0411**

MasterCard VISA DISCOVER NOVUS Cards

# AMATEUR ELECTRONIC SUPPLY®

# ORDER BLANK

5710 W. Good Hope Road • Milwaukee, Wisconsin 53223
**Phone: (414) 358-0333 • Toll Free: 1-800-558-0411**
***You may FAX this order to:* (414) 358-3337**

**ACCOUNT NO.** _____ Date _____
Name _____ Call _____
Address _____
City/State _____ Zip _____
E-Mail Address: _____
Phone No. (Home) ( ) _____ Hours: _____
Phone No. (Work) ( ) _____ Hours: _____

**SHIP TO** *(If other than at left):*
_____
_____
_____

**IF YOU HAVE MOVED** since your last order, please show your old address:
_____
_____

■ **SHIPPING METHODS** Orders are shipped via **UPS Ground** at the FLAT-RATE shown at the bottom. Shipments to APO/FPO & Puerto Rico are via Priority Mail. *For Faster Service* – select one of these express methods: ❒ **UPS Next Day Air** ❒ **2nd Day Air** ❒ **3-Day Select** ❒ **Federal Express** ❒ **Express Mail.** These alternate methods are not flat-rated so allow for additional shipping charges (no flat-rate credit). Orders exceeding UPS or USPS weight, size or value limits will be shipped via Truck or Air Freight collect *Shipping charges taxable in WI, FL & NV.

■ **TRADE-INS:** Use a sturdy carton and plenty of packing material for protection. Ship PREPAID and FULLY INSURED. Do not use Bus or Parcel Post. Collect shipments will not be accepted. AES® assumes no responsibility for damage in transit or for filing damage claims. Canadians, inquire locally about taxes and/or customs charges before releasing your shipment.

Federal Express® Delivery Service Available

| QTY. | DO NOT USE | MANUFACTURER • PART OR MODEL # • DESCRIPTION | PRICE EACH | TOTAL |
|---|---|---|---|---|
| | | | | |
| | | | | |
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| | | | | |

**FINAL BALANCE DUE (LINE 10) TO BE PAID BY:**

MasterCard VISA DISCOVER NOVUS AMERICAN EXPRESS Cards

Account Number

Cardholder's Name — Card Expires

Cardholder's Signature — Date

| | | |
|---|---|---|
| LINE 1 — | Total Amount of Order ..... | $ |
| LINE 2 — | Subtract TRADE-IN Allowance (if any) ..... Enclose mail quotation or reference telephone quote & list Trade-in items. **IMPORTANT!** Persons having a Trade-in must check one of the choices in the box at the lower left of this Order Blank. | – |
| LINE 3 — | Shipping Charges (see METHODS, and below) ..... *Shipping Charges are taxable in Wisconsin, Florida & Nevada* | + |
| LINE 4— | Sales Tax: ❒ WI- 5.6%, ❒ FL- 6%, ❒ NV- 7%, ❒ OH-5.75% . *For Ohio & Nevada figure tax from LINE 1 (before trade-in allowance)* | + |
| LINE 5— | Subtract here: AES Refund Checks, Gift Certificates or Manufacturer's Coupons (if any) ..... | - |
| LINE 6 — | **Balance** | $ |
| LINE 7 — | Due AES from previous order (if any) ..... | + |
| LINE 8 — | Total Amount Due ..... | $ |
| LINE 9 — | Amount Enclosed ..... | – |
| LINE 10 — | Final Balance Due (if any) ..... | $ |

❒ **CHECK OR MONEY ORDER** For your protection — **DO NOT MAIL CURRENCY!** Send a Bank Check or Money Order. A Personal Check may delay shipping until it clears our bank. Please attach your remittance firmly to the top of this order blank.

❒ **COD** The total cost of Merchandise, Shipping charges and a $6.50 COD fee per package will be collected upon delivery. Only **Cash** or **Certified Check** accepted

***MINIMUM $20.00 COD ORDER • NO AIR OR PARCEL POST COD's***

**IF YOU HAVE A TRADE-IN — CHECK ONE OF THE FOLLOWING:**

❒ Hold this order until you receive and approve my Trade-in.
❒ Payment-in-full enclosed. Refund the allowance after my Trade-in is received and approved.
❒ Charge the **FULL AMOUNT** of my order to my Charge Card and Credit my trade-in allowance when my trade-in is received and approved.

**UPS Ground flat-rate Shipping (48-STATES): Orders up to $100.00 ($4.95); $100.01 to $500.00 ($9.95); $500.01 to $1499.99 ($14.95); $1500.00 & Up (PREPAID)**

*The flat-rate is not applicable to the faster UPS Shipping Methods shown on reverse side or to Truck or Drop Shipments from manufacturers.*

**Cash Refunds: Amounts under $5.00 will not refunded unless requested in writing to Milwaukee Headquarters.**

## NEXT DAY AIR

| NOT TO EXCEED IN LBS | ZONES 102 | 103 | 104 | 105 | 106 | 107 | 108 | *124 | 125 | *126 |
|---|---|---|---|---|---|---|---|---|---|---|
| Letter | $11.00 | $11.75 | $12.50 | $12.75 | $13.00 | $13.25 | $13.50 | $14.00 | $14.00 | $19.25 |
| 1 | 14.00 | 15.25 | 17.25 | 18.00 | 18.75 | 19.50 | 20.00 | 22.50 | 22.50 | 31.75 |
| 2 | 15.00 | 16.25 | 19.25 | 20.25 | 21.00 | 21.75 | 22.25 | 24.00 | 24.50 | 33.75 |
| 3 | 16.00 | 17.25 | 21.00 | 22.25 | 23.25 | 23.75 | 24.50 | 25.50 | 27.00 | 35.50 |
| 4 | 17.00 | 18.50 | 22.75 | 24.25 | 25.25 | 26.00 | 26.75 | 27.00 | 28.75 | 36.50 |
| 5 | 18.00 | 19.50 | 24.75 | 26.25 | 27.50 | 28.25 | 28.75 | 29.00 | 31.00 | 37.75 |
| 6 | 18.75 | 20.50 | 26.75 | 28.25 | 29.75 | 30.50 | 31.00 | 31.25 | 33.00 | 39.25 |
| 7 | 19.50 | 21.50 | 28.75 | 30.50 | 32.00 | 32.50 | 33.25 | 33.50 | 35.00 | 41.50 |
| 8 | 20.25 | 22.50 | 30.75 | 32.75 | 34.25 | 34.75 | 35.25 | 35.50 | 37.25 | 43.50 |
| 9 | 21.00 | 23.50 | 32.75 | 34.75 | 36.25 | 36.75 | 37.50 | 37.75 | 39.25 | 45.75 |
| 10 | 21.75 | 24.50 | 34.75 | 36.75 | 38.25 | 39.00 | 39.50 | 39.75 | 41.50 | 47.75 |
| 11 | 22.50 | 25.75 | 36.50 | 38.75 | 40.25 | 41.00 | 41.75 | 42.00 | 44.25 | 50.00 |
| 12 | 23.25 | 26.75 | 38.25 | 40.75 | 42.25 | 43.00 | 43.75 | 44.00 | 45.75 | 52.00 |
| 13 | 24.00 | 27.75 | 40.00 | 42.50 | 44.25 | 45.00 | 46.00 | 46.25 | 47.00 | 54.25 |
| 14 | 24.75 | 28.75 | 41.75 | 44.25 | 46.00 | 47.00 | 48.00 | 48.25 | 48.25 | 56.25 |
| 15 | 25.50 | 29.75 | 43.50 | 46.00 | 47.75 | 48.75 | 50.00 | 50.25 | 50.25 | 58.25 |
| 16 | 26.25 | 30.75 | 45.00 | 47.75 | 49.50 | 50.50 | 52.00 | 52.25 | 52.25 | 60.25 |
| 17 | 27.00 | 31.75 | 46.50 | 49.25 | 51.00 | 52.25 | 53.75 | 54.00 | 54.00 | 62.00 |
| 18 | 28.00 | 32.50 | 48.00 | 50.75 | 52.50 | 53.75 | 55.50 | 55.75 | 55.75 | 63.75 |
| 19 | 28.75 | 33.25 | 49.50 | 52.25 | 54.00 | 55.25 | 57.25 | 57.50 | 57.50 | 65.50 |
| 20 | 29.50 | 34.00 | 51.00 | 53.75 | 55.50 | 56.75 | 58.75 | 59.00 | 59.00 | 67.00 |
| 21 | 30.25 | 34.75 | 52.50 | 55.50 | 57.00 | 58.25 | 60.25 | 60.50 | 60.50 | 68.50 |
| 22 | 31.00 | 35.50 | 54.25 | 57.25 | 58.50 | 59.75 | 61.75 | 62.00 | 62.00 | 70.00 |
| 23 | 31.75 | 36.25 | 55.75 | 58.75 | 60.00 | 61.25 | 63.50 | 63.75 | 63.75 | 71.75 |
| 24 | 32.50 | 37.25 | 57.25 | 60.25 | 61.50 | 62.75 | 65.00 | 65.25 | 65.25 | 73.25 |
| 25 | 33.25 | 38.00 | 58.75 | 61.75 | 63.25 | 64.25 | 66.50 | 66.75 | 66.75 | 74.75 |
| 26 | 34.25 | 38.75 | 60.25 | 63.25 | 64.75 | 65.75 | 68.25 | 68.50 | 68.50 | 76.50 |
| 27 | 35.00 | 39.50 | 61.75 | 64.75 | 66.25 | 67.25 | 70.00 | 70.25 | 70.25 | 78.25 |
| 28 | 35.75 | 40.25 | 63.50 | 66.25 | 67.75 | 69.00 | 71.50 | 71.75 | 71.75 | 79.75 |
| 29 | 36.50 | 41.00 | 65.00 | 67.75 | 69.25 | 70.75 | 73.25 | 73.50 | 73.50 | 81.50 |
| 30 | 37.25 | 41.75 | 66.50 | 69.50 | 71.00 | 72.25 | 75.00 | 75.25 | 75.25 | 83.25 |
| 31 | 38.00 | 42.75 | 68.00 | 71.25 | 72.50 | 73.75 | 76.75 | 77.00 | 77.77 | 85.00 |
| 32 | 38.75 | 43.50 | 69.50 | 72.75 | 74.00 | 75.50 | 78.50 | 78.75 | 78.75 | 86.75 |
| 33 | 39.75 | 44.25 | 71.25 | 74.50 | 75.75 | 77.25 | 80.25 | 80.50 | 80.50 | 88.50 |
| 34 | 40.50 | 45.00 | 72.75 | 76.25 | 77.50 | 79.00 | 82.00 | 82.25 | 82.25 | 90.25 |
| 35 | 41.25 | 45.75 | 74.25 | 78.00 | 79.00 | 80.75 | 83.75 | 84.00 | 84.00 | 92.00 |
| 36 | 42.00 | 46.50 | 75.75 | 79.75 | 80.75 | 82.50 | 85.50 | 85.75 | 85.75 | 93.75 |
| 37 | 42.75 | 47.25 | 77.25 | 81.50 | 82.50 | 84.25 | 87.25 | 87.50 | 87.50 | 95.50 |
| 38 | 43.50 | 48.00 | 78.75 | 83.25 | 84.25 | 86.00 | 89.00 | 89.25 | 89.25 | 97.25 |
| 39 | 44.25 | 49.00 | 80.25 | 85.00 | 86.00 | 87.75 | 90.75 | 91.00 | 91.00 | 99.00 |
| 40 | 45.00 | 50.00 | 82.00 | 86.75 | 87.75 | 89.50 | 92.50 | 92.75 | 92.75 | 100.75 |
| 41 | 45.75 | 51.00 | 83.50 | 88.50 | 89.50 | 91.25 | 94.50 | 94.75 | 94.75 | 102.75 |
| 42 | 46.50 | 52.00 | 85.00 | 90.00 | 91.25 | 93.00 | 96.25 | 96.50 | 96.50 | 104.50 |
| 43 | 47.25 | 53.00 | 86.50 | 91.50 | 93.00 | 94.75 | 98.00 | 98.25 | 98.25 | 106.25 |
| 44 | 48.25 | 54.00 | 88.00 | 93.00 | 94.50 | 96.50 | 99.75 | 100.00 | 100.00 | 108.00 |
| 45 | 49.25 | 55.00 | 89.50 | 94.25 | 96.00 | 98.00 | 101.50 | 101.75 | 101.75 | 109.75 |
| 46 | 50.25 | 56.00 | 91.00 | 95.50 | 97.50 | 99.50 | 103.25 | 103.50 | 103.50 | 111.50 |
| 47 | 51.00 | 57.00 | 92.50 | 96.75 | 99.00 | 101.00 | 104.75 | 105.00 | 105.00 | 113.00 |
| 48 | 51.75 | 58.00 | 94.00 | 98.00 | 100.50 | 102.50 | 106.25 | 106.50 | 106.50 | 114.50 |
| 49 | 52.50 | 59.25 | 95.50 | 99.25 | 102.25 | 104.25 | 108.00 | 108.25 | 108.25 | 116.25 |
| 50 | 53.50 | 60.50 | 97.00 | 100.50 | 104.00 | 106.00 | 109.95 | 110.00 | 110.00 | 118.00 |
| 51 | 54.50 | 61.75 | 98.50 | 102.00 | 105.75 | 107.75 | 111.50 | 111.75 | 111.75 | 119.75 |
| 52 | 55.50 | 63.00 | 100.00 | 103.50 | 107.50 | 109.75 | 113.50 | 113.75 | 113.75 | 121.75 |
| 53 | 56.50 | 64.25 | 101.50 | 105.25 | 109.25 | 111.75 | 115.50 | 115.75 | 115.75 | 123.75 |
| 54 | 57.50 | 65.50 | 103.00 | 107.00 | 111.00 | 113.75 | 117.50 | 117.75 | 117.75 | 125.75 |
| 55 | 58.50 | 68.00 | 104.50 | 108.50 | 112.75 | 115.75 | 119.50 | 119.75 | 119.75 | 127.75 |
| 56 | 59.50 | 68.25 | 106.00 | 110.00 | 114.50 | 117.75 | 121.50 | 121.75 | 121.75 | 129.75 |
| 57 | 60.50 | 59.75 | 107.75 | 111.75 | 116.25 | 119.75 | 123.50 | 123.75 | 123.75 | 131.75 |
| 58 | 61.50 | 71.00 | 109.25 | 113.50 | 118.00 | 121.75 | 125.75 | 126.00 | 126.00 | 134.00 |
| 59 | 62.50 | 72.25 | 111.00 | 115.25 | 119.75 | 123.75 | 128.00 | 128.25 | 128.25 | 136.25 |
| 60 | 63.75 | 73.75 | 112.75 | 117.00 | 121.75 | 125.75 | 130.25 | 130.50 | 130.50 | 138.50 |
| 61 | 65.00 | 75.25 | 114.50 | 119.00 | 123.75 | 127.75 | 132.75 | 133.00 | 133.00 | 141.00 |
| 62 | 66.25 | 76.75 | 116.25 | 121.00 | 125.75 | 130.00 | 135.25 | 135.50 | 135.50 | 143.50 |
| 63 | 67.50 | 78.25 | 118.00 | 123.00 | 127.75 | 132.25 | 137.75 | 138.00 | 138.00 | 146.00 |
| 64 | 68.75 | 79.75 | 120.00 | 125.00 | 129.75 | 134.50 | 140.25 | 140.50 | 140.50 | 148.50 |
| 65 | 70.00 | 81.25 | 121.75 | 127.00 | 132.00 | 136.75 | 142.75 | 143.00 | 143.00 | 151.00 |
| 66 | 71.25 | 82.75 | 123.50 | 129.00 | 134.25 | 139.00 | 145.00 | 145.25 | 145.25 | 153.25 |
| 67 | 72.50 | 84.25 | 125.25 | 131.00 | 136.25 | 141.25 | 147.25 | 147.50 | 147.50 | 155.50 |
| 68 | 73.75 | 86.00 | 127.25 | 133.25 | 138.50 | 143.50 | 149.75 | 150.00 | 150.00 | 158.00 |
| 69 | 75.25 | 87.75 | 129.25 | 135.25 | 140.75 | 146.00 | 152.00 | 152.25 | 152.25 | 160.25 |
| 70 | 76.75 | 89.25 | 131.25 | 137.50 | 142.75 | 148.50 | 154.25 | 154.50 | 154.50 | 162.50 |

ANY FRANCTION OF A POUND OVER THE WEIGHT WHOWN TAKES THE NEXT HIGHER RATE.

## 2nd DAY AIR

| NOT TO EXCEED IN LBS | ZONES 202 | 203 | 204 | 205 | 206 | 207 | 208 | *224 | 225 | *226 |
|---|---|---|---|---|---|---|---|---|---|---|
| Letter | $5.75 | $6.00 | $6.25 | $6.50 | $6.75 | $7.00 | $7.25 | $10.50 | $10.50 | $15.00 |
| 1 | 6.25 | 6.50 | 6.75 | 7.00 | 7.50 | 8.00 | 8.25 | 11.75 | 11.25 | 22.75 |
| 2 | 6.50 | 7.00 | 7.50 | 8.00 | 8.50 | 9.00 | 9.50 | 13.25 | 12.75 | 24.25 |
| 3 | 7.00 | 7.50 | 8.50 | 9.00 | 9.75 | 10.25 | 10.50 | 14.75 | 14.50 | 25.75 |
| 4 | 7.50 | 8.00 | 9.25 | 10.00 | 11.00 | 11.50 | 12.00 | 16.00 | 16.00 | 27.00 |
| 5 | 8.00 | 8.75 | 10.00 | 11.00 | 12.25 | 13.00 | 13.50 | 17.50 | 17.25 | 28.00 |
| 6 | 8.75 | 9.50 | 10.75 | 12.00 | 13.75 | 14.50 | 15.25 | 19.00 | 19.00 | 29.00 |
| 7 | 9.25 | 10.25 | 11.75 | 13.25 | 15.25 | 16.00 | 17.00 | 20.50 | 20.25 | 30.50 |
| 8 | 9.75 | 11.00 | 12.75 | 14.50 | 16.75 | 17.75 | 18.50 | 22.00 | 21.75 | 32.00 |
| 9 | 10.25 | 11.75 | 13.75 | 15.75 | 18.25 | 19.25 | 19.75 | 23.75 | 23.25 | 33.75 |
| 10 | 10.75 | 12.50 | 14.75 | 16.75 | 19.75 | 20.75 | 21.25 | 25.50 | 24.75 | 35.50 |
| 11 | 11.25 | 13.25 | 15.50 | 17.75 | 21.00 | 22.00 | 22.75 | 27.25 | 26.50 | 37.25 |
| 12 | 12.00 | 14.00 | 16.25 | 183.75 | 22.25 | 23.25 | 24.00 | 28.50 | 28.00 | 38.50 |
| 13 | 12.75 | 14.50 | 17.00 | 20.00 | 23.50 | 24.50 | 25.25 | 29.75 | 29.50 | 39.75 |
| 14 | 13.25 | 15.00 | 18.00 | 21.00 | 24.75 | 25.75 | 26.50 | 31.00 | 30.75 | 41.00 |
| 15 | 13.75 | 15.50 | 18.75 | 22.00 | 26.25 | 27.00 | 28.00 | 32.75 | 32.50 | 42.75 |
| 16 | 14.25 | 16.25 | 19.75 | 23.00 | 27.50 | 28.25 | 29.25 | 34.00 | 33.75 | 44.00 |
| 17 | 14.75 | 17.00 | 20.75 | 24.00 | 38.75 | 29.75 | 30.75 | 35.25 | 35.00 | 45.25 |
| 18 | 15.25 | 17.50 | 21.50 | 25.00 | 30.00 | 31.25 | 32.25 | 36.75 | 36.50 | 46.75 |
| 19 | 15.75 | 18.00 | 22.25 | 26.00 | 31.25 | 33.00 | 34.00 | 38.00 | 37.75 | 48.00 |
| 20 | 16.25 | 18.75 | 23.00 | 27.00 | 32.75 | 34.75 | 35.75 | 39.75 | 39.25 | 49.75 |
| 21 | 16.75 | 19.50 | 24.00 | 28.00 | 34.25 | 36.50 | 37.50 | 41.50 | 40.75 | 51.50 |
| 22 | 17.25 | 20.25 | 24.75 | 29.00 | 35.50 | 38.00 | 39.25 | 43.00 | 42.00 | 53.00 |
| 23 | 17.75 | 20.75 | 25.50 | 30.00 | 36.75 | 39.50 | 40.75 | 44.75 | 43.50 | 54.75 |
| 24 | 18.25 | 21.50 | 26.50 | 31.00 | 38.25 | 41.00 | 42.50 | 46.50 | 44.75 | 56.50 |
| 25 | 18.75 | 22.00 | 27.25 | 32.00 | 39.50 | 42.25 | 44.00 | 47.75 | 46.00 | 57.75 |
| 26 | 19.25 | 22.50 | 28.00 | 33.00 | 40.75 | 43.50 | 45.50 | 49.25 | 46.75 | 59.25 |
| 27 | 20.00 | 23.25 | 28.75 | 34.00 | 42.00 | 45.00 | 47.00 | 50.50 | 47.25 | 60.50 |
| 28 | 20.75 | 24.00 | 29.50 | 35.00 | 43.25 | 46.50 | 48.75 | 51.75 | 49.00 | 61.75 |
| 29 | 21.25 | 24.50 | 30.25 | 36.00 | 44.50 | 58.00 | 50.25 | 53.00 | 50.50 | 63.00 |
| 30 | 21.75 | 25.25 | 31.25 | 37.00 | 46.00 | 49.50 | 51.75 | 54.75 | 52.00 | 64.75 |
| 31 | 22.25 | 26.00 | 32.25 | 38.00 | 47.25 | 50.75 | 53.25 | 55.75 | 53.50 | 65.75 |
| 32 | 22.75 | 26.50 | 33.00 | 38.75 | 48.50 | 52.00 | 54.75 | 56.75 | 55.00 | 66.75 |
| 33 | 23.25 | 27.00 | 33.75 | 39.75 | 49.75 | 53.50 | 56.00 | 58.00 | 56.25 | 68.00 |
| 34 | 23.75 | 27.75 | 34.50 | 40.50 | 51.00 | 55.00 | 57.50 | 59.00 | 57.75 | 69.00 |
| 35 | 24.25 | 28.50 | 35.25 | 41.50 | 52.50 | 56.25 | 58.75 | 60.00 | 59.00 | 70.00 |
| 36 | 24.75 | 29.25 | 36.00 | 42.25 | 53.75 | 57.50 | 60.00 | 61.00 | 60.25 | 71.00 |
| 37 | 25.25 | 29.75 | 36.75 | 43.25 | 55.00 | 59.00 | 61.50 | 61.75 | 61.75 | 71.75 |
| 38 | 25.75 | 30.25 | 37.75 | 44.25 | 56.25 | 60.50 | 63.00 | 63.25 | 63.25 | 73.25 |
| 39 | 26.50 | 30.75 | 38.50 | 45.25 | 57.50 | 61.75 | 64.50 | 64.75 | 64.75 | 74.75 |
| 40 | 27.25 | 31.50 | 39.25 | 46.25 | 58.75 | 63.00 | 65.75 | 66.00 | 66.00 | 76.00 |
| 41 | 28.00 | 32.25 | 40.00 | 47.00 | 60.00 | 64.50 | 67.25 | 67.50 | 67.50 | 77.50 |
| 42 | 28.50 | 33.00 | 40.75 | 47.75 | 61.25 | 66.00 | 68.75 | 69.00 | 69.00 | 79.00 |
| 43 | 29.00 | 33.75 | 41.50 | 57.75 | 62.50 | 67.25 | 70.00 | 70.25 | 70.25 | 80.25 |
| 44 | 29.50 | 34.25 | 42.25 | 49.75 | 63.75 | 68.50 | 71.25 | 71.50 | 71.50 | 81.50 |
| 45 | 30.00 | 35.00 | 43.00 | 50.75 | 65.00 | 69.75 | 72.50 | 72.75 | 72.75 | 82.75 |
| 46 | 30.50 | 35.50 | 44.00 | 51.75 | 66.25 | 71.00 | 73.75 | 74.00 | 74.00 | 84.00 |
| 47 | 31.00 | 36.25 | 44.75 | 52.50 | 67.50 | 72.50 | 75.25 | 75.50 | 75.50 | 85.50 |
| 48 | 31.75 | 37.00 | 45.50 | 53.25 | 68.75 | 74.00 | 76.50 | 76.75 | 76.75 | 86.75 |
| 49 | 32.25 | 37.75 | 46.25 | 54.25 | 70.00 | 75.25 | 77.75 | 78.00 | 78.00 | 88.00 |
| 50 | 32.75 | 38.25 | 47.00 | 55.25 | 71.00 | 76.50 | 79.00 | 79.25 | 79.25 | 89.25 |
| 51 | 33.25 | 38.75 | 47.75 | 56.25 | 82.25 | 78.00 | 80.25 | 80.50 | 80.50 | 90.50 |
| 52 | 33.75 | 39.50 | 48.50 | 57.25 | 73.50 | 79.25 | 81.50 | 81.75 | 81.75 | 91.75 |
| 53 | 34.50 | 40.25 | 49.25 | 58.00 | 74.75 | 80.50 | 83.00 | 83.25 | 83.25 | 93.25 |
| 54 | 35.00 | 41.00 | 50.00 | 58.75 | 76.00 | 81.75 | 84.25 | 84.50 | 84.50 | 94.50 |
| 55 | 35.50 | 41.50 | 50.75 | 59.75 | 77.00 | 83.25 | 85.50 | 85.75 | 85.75 | 95.75 |
| 56 | 36.00 | 42.00 | 51.50 | 60.75 | 78.25 | 84.50 | 86.75 | 87.00 | 87.00 | 97.00 |
| 57 | 36.50 | 42.75 | 52.50 | 61.75 | 79.50 | 85.75 | 88.00 | 88.25 | 88.25 | 98.25 |
| 58 | 37.00 | 43.25 | 53.25 | 62.50 | 80.75 | 87.00 | 89.50 | 89.75 | 89.75 | 99.75 |
| 59 | 37.50 | 43.75 | 54.00 | 63.50 | 82.00 | 88.25 | 90.75 | 91.00 | 91.00 | 101.00 |
| 60 | 38.00 | 44.50 | 55.00 | 64.50 | 83.25 | 89.50 | 92.25 | 92.50 | 92.50 | 102.50 |
| 61 | 38.75 | 45.00 | 55.75 | 65.50 | 84.50 | 91.00 | 93.50 | 93.75 | 93.75 | 103.75 |
| 62 | 39.50 | 45.75 | 56.50 | 66.50 | 85.75 | 92.50 | 95.00 | 95.25 | 95.25 | 105.25 |
| 63 | 40.25 | 46.50 | 57.25 | 67.50 | 87.00 | 93.75 | 96.50 | 96.75 | 96.75 | 106.75 |
| 64 | 40.75 | 47.25 | 58.00 | 68.50 | 88.25 | 95.00 | 98.00 | 98.25 | 98.25 | 108.25 |
| 65 | 41.25 | 48.00 | 58.75 | 69.50 | 89.75 | 96.50 | 99.25 | 99.50 | 99.50 | 109.50 |
| 66 | 41.75 | 48.50 | 59.75 | 70.50 | 91.00 | 97.75 | 100.75 | 101.00 | 101.00 | 111.00 |
| 67 | 42.25 | 49.25 | 60.50 | 71.50 | 92.25 | 99.25 | 102.25 | 102.50 | 102.50 | 112.50 |
| 68 | 42.75 | 49.75 | 61.50 | 72.50 | 93.50 | 100.75 | 103.75 | 104.00 | 104.00 | 114.00 |
| 69 | 43.25 | 50.50 | 62.50 | 73.50 | 94.75 | 102.00 | 105.00 | 105.25 | 105.25 | 115.25 |
| 70 | 43.75 | 51.25 | 63.25 | 74.50 | 96.00 | 103.25 | 106.50 | 106.75 | 106.75 | 116.75 |

ANY FRACTION OF A POUND OVER THE WEIGHT SHOWN TAKES THE NEXT HIGHER RATE.

## 3 DAY SELECT

| NOT TO EXCEED IN LBS | ZONES 302 | 303 | 304 | 305 | 306 | 307 | 308 |
|---|---|---|---|---|---|---|---|
| 1 | $4.40 | $4.60 | $4.90 | $5.10 | $5.30 | $5.60 | $5.80 |
| 2 | 4.60 | 4.80 | 5.10 | 5.80 | 6.10 | 6.50 | 6.80 |
| 3 | 5.00 | 5.30 | 5.80 | 6.50 | 7.00 | 7.40 | 7.80 |
| 4 | 5.40 | 5.80 | 6.40 | 7.10 | 7.80 | 8.30 | 8.80 |
| 5 | 5.70 | 6.30 | 6.90 | 7.70 | 8.50 | 9.10 | 9.70 |
| 6 | 6.10 | 6.80 | 7.50 | 8.40 | 9.30 | 10.00 | 10.70 |
| 7 | 6.50 | 7.30 | 8.10 | 9.10 | 10.10 | 10.90 | 11.70 |
| 8 | 6.90 | 7.80 | 8.70 | 9.80 | 11.00 | 11.90 | 12.70 |
| 9 | 7.30 | 8.30 | 9.30 | 10.50 | 11.80 | 12.80 | 13.70 |
| 10 | 7.70 | 8.80 | 9.90 | 11.20 | 12.60 | 13.70 | 14.70 |
| 11 | 8.10 | 9.30 | 10.50 | 11.80 | 13.40 | 14.60 | 15.70 |
| 12 | 8.50 | 9.80 | 11.10 | 12.50 | 14.20 | 15.50 | 16.70 |
| 13 | 8.90 | 10.30 | 11.70 | 13.20 | 15.00 | 16.40 | 17.70 |
| 14 | 9.30 | 10.80 | 12.30 | 13.90 | 15.90 | 17.30 | 18.70 |
| 15 | 9.70 | 11.30 | 12.90 | 14.70 | 16.80 | 18.20 | 19.70 |
| 16 | 10.10 | 11.80 | 13.50 | 15.40 | 17.60 | 19.10 | 20.70 |
| 17 | 10.50 | 12.20 | 14.10 | 16.10 | 18.40 | 20.00 | 21.70 |
| 18 | 10.90 | 12.70 | 14.70 | 16.80 | 19.20 | 20.90 | 22.70 |
| 19 | 11.30 | 13.20 | 15.30 | 17.50 | 20.00 | 21.80 | 23.70 |
| 20 | 11.70 | 13.70 | 15.90 | 18.20 | 20.80 | 22.70 | 24.60 |
| 21 | 12.10 | 14.20 | 16.50 | 18.90 | 21.60 | 23.60 | 25.50 |
| 22 | 12.50 | 14.70 | 17.10 | 19.60 | 22.40 | 24.50 | 26.50 |
| 23 | 12.90 | 15.20 | 17.60 | 20.20 | 23.20 | 25.40 | 27.50 |
| 24 | 13.30 | 15.70 | 18.20 | 20.90 | 24.00 | 26.30 | 28.50 |
| 25 | 13.80 | 16.20 | 18.80 | 21.60 | 24.80 | 27.20 | 29.50 |
| 26 | 14.20 | 16.70 | 19.40 | 22.30 | 25.60 | 28.10 | 30.50 |
| 27 | 14.60 | 17.20 | 20.00 | 22.90 | 26.40 | 29.00 | 31.50 |
| 28 | 15.00 | 17.60 | 20.60 | 23.50 | 27.30 | 29.90 | 32.50 |
| 29 | 15.40 | 18.10 | 21.20 | 24.20 | 28.20 | 30.80 | 33.50 |
| 30 | 15.80 | 18.60 | 21.80 | 24.90 | 29.00 | 31.60 | 34.40 |
| 31 | 16.20 | 19.10 | 22.40 | 25.60 | 29.80 | 32.50 | 35.30 |
| 32 | 16.60 | 19.60 | 23.00 | 26.30 | 30.60 | 33.40 | 36.30 |
| 33 | 17.00 | 20.10 | 23.60 | 27.00 | 31.40 | 34.30 | 37.30 |
| 34 | 17.40 | 20.60 | 24.20 | 27.70 | 32.20 | 35.10 | 38.30 |
| 35 | 17.80 | 21.10 | 24.80 | 28.40 | 33.00 | 35.90 | 39.30 |
| 36 | 18.20 | 21.60 | 25.40 | 29.10 | 33.80 | 36.80 | 40.30 |
| 37 | 18.60 | 22.10 | 26.00 | 29.80 | 36.40 | 37.70 | 41.20 |
| 38 | 19.00 | 22.60 | 26.50 | 30.50 | 35.40 | 38.60 | 42.20 |
| 39 | 19.40 | 23.00 | 27.10 | 31.20 | 36.20 | 39.50 | 43.20 |
| 40 | 19.80 | 23.50 | 27.70 | 31.90 | 37.00 | 40.40 | 44.20 |
| 41 | 20.20 | 24.00 | 28.30 | 32.60 | 37.80 | 41.20 | 45.20 |
| 42 | 20.60 | 24.50 | 28.90 | 33.30 | 38.70 | 42.10 | 46.20 |
| 43 | 21.00 | 25.00 | 29.50 | 34.00 | 39.50 | 43.00 | 47.20 |
| 44 | 21.40 | 25.50 | 30.10 | 34.70 | 40.30 | 43.90 | 48.10 |
| 45 | 21.80 | 26.00 | 30.70 | 35.40 | 41.10 | 44.80 | 49.10 |
| 46 | 22.20 | 26.50 | 31.20 | 36.10 | 41.90 | 45.70 | 50.10 |
| 47 | 22.60 | 27.00 | 31.80 | 36.80 | 42.70 | 46.60 | 51.10 |
| 48 | 23.00 | 27.50 | 32.40 | 37.50 | 43.50 | 47.50 | 52.10 |
| 49 | 23.40 | 28.00 | 33.00 | 38.20 | 44.30 | 48.40 | 53.10 |
| 50 | 23.80 | 28.50 | 33.60 | 38.90 | 45.10 | 49.30 | 54.10 |
| 51 | 24.20 | 29.00 | 34.20 | 39.60 | 45.90 | 50.20 | 55.10 |
| 52 | 24.60 | 29.40 | 34.80 | 40.20 | 46.70 | 51.00 | 56.10 |
| 53 | 25.00 | 29.90 | 35.40 | 40.90 | 47.50 | 51.90 | 57.10 |
| 54 | 25.40 | 30.40 | 36.00 | 41.60 | 48.30 | 52.80 | 58.10 |
| 55 | 25.80 | 30.90 | 36.50 | 42.30 | 49.20 | 53.70 | 59.10 |
| 56 | 26.20 | 31.40 | 37.10 | 43.00 | 50.00 | 54.60 | 60.10 |
| 57 | 26.60 | 31.90 | 37.70 | 43.70 | 50.80 | 55.50 | 61.10 |
| 58 | 27.00 | 32.40 | 38.30 | 44.30 | 51.60 | 56.40 | 62.10 |
| 59 | 27.40 | 32.90 | 38.90 | 45.00 | 52.40 | 57.30 | 63.10 |
| 60 | 27.80 | 33.40 | 39.50 | 45.70 | 53.20 | 58.20 | 64.10 |
| 61 | 28.20 | 33.90 | 40.10 | 46.40 | 54.10 | 59.10 | 65.10 |
| 62 | 28.60 | 34.40 | 40.70 | 47.10 | 54.90 | 60.00 | 66.10 |
| 63 | 29.00 | 34.90 | 41.30 | 47.80 | 55.70 | 60.90 | 67.10 |
| 64 | 29.40 | 35.30 | 41.80 | 48.40 | 56.50 | 61.80 | 68.00 |
| 65 | 29.80 | 35.80 | 42.40 | 49.10 | 57.30 | 62.70 | 69.00 |
| 66 | 30.30 | 36.30 | 43.00 | 49.80 | 58.10 | 63.60 | 70.00 |
| 67 | 30.70 | 36.80 | 43.60 | 50.50 | 58.90 | 64.50 | 71.00 |
| 68 | 31.10 | 37.30 | 44.20 | 51.20 | 59.70 | 65.40 | 71.00 |
| 69 | 31.50 | 37.80 | 44.80 | 51.90 | 60.50 | 66.30 | 73.00 |
| 70 | 31.90 | 38.30 | 45.30 | 52.60 | 61.30 | 67.20 | 73.90 |

ANY FRACTION OF A POUND OVER THE WEIGHT SHOWN TAKES THE NEXT HIGHER RATE

## ZONE CHART

| ZIP CODE PREFIXES | ZONE |
|---|---|
| 004-005 | 5 |
| 006-007 | – |
| 008 | – |
| 009 | – |
| 010-089 | 5 |
| 090-099 | – |
| 100-129 | 5 |
| 130-132 | 4 |
| 133-135 | 5 |
| 136-174 | 4 |
| 175-176 | 5 |
| 177-179 | 4 |
| 180-199 | 5 |
| 200-214 | 5 |
| 215 | 4 |
| 216 | 5 |
| 217 | 4 |
| 218-225 | 5 |
| 226 | 4 |
| 227 | 5 |
| 228-229 | 4 |
| 230-239 | 5 |
| 240-268 | 4 |
| 270-286 | 5 |
| 287-289 | 4 |
| 290-299 | 5 |
| 300-306 | 5 |
| 307 | 4 |
| 308-326 | 5 |
| 327-339 | 6 |
| 340-341 | – |
| 342 | 6 |
| 344 | 5 |
| 346-349 | 6 |
| 350-355 | 5 |
| 356-358 | 4 |
| 359-369 | 5 |
| 370-386 | 4 |
| 387-399 | 5 |
| 400-409 | 4 |
| 410 | 3 |
| 411-432 | 4 |
| 433-436 | 3 |
| 437-447 | 4 |
| 448-455 | 3 |
| 456-457 | 4 |
| 458-462 | 3 |
| 463-466 | 2 |
| 467-470 | 3 |
| 471 | 4 |
| 472-475 | 3 |
| 476-477 | 4 |
| 478-487 | 3 |
| 488-491 | 2 |
| 492 | 3 |
| 493-496 | 2 |
| 497-499 | 3 |
| 500-503 | 4 |
| 504 | 3 |
| 505 | 4 |
| 506-507 | 3 |
| 508-516 | 4 |
| 520 | 2 |
| 521-528 | 3 |
| 530-539 | 2 |
| 540 | 3 |
| 541-544 | 2 |
| 545-548 | 3 |
| 549 | 2 |
| 550-555 | 3 |
| 556-558 | 4 |
| 559 | 3 |
| 560-574 | 4 |
| 575-577 | 5 |
| 580-582 | 4 |
| 583 | 5 |
| 584 | 4 |
| 585-588 | 5 |
| 590-591 | 6 |
| 592-593 | 5 |
| 594-599 | 6 |
| 600-611 | 2 |
| 612 | 3 |
| 613 | 2 |
| 614-619 | 3 |
| 620-622 | 4 |
| 623-628 | 3 |
| 629-633 | 4 |
| 634 | 3 |
| 635-669 | 4 |
| 670-672 | 5 |
| 673-674 | 4 |
| 675-679 | 5 |
| 680-689 | 4 |
| 690-693 | 5 |
| 700-722 | 5 |
| 723-727 | 4 |
| 728-732 | 5 |
| 733 | 6 |
| 734-742 | 5 |
| 743 | 4 |
| 744-768 | 5 |
| 769 | 6 |
| 770-778 | 5 |
| 779-789 | 6 |
| 790-796 | 5 |
| 797-799 | 6 |
| 800-810 | 5 |
| 811 | 6 |
| 812 | 5 |
| 813-816 | 6 |
| 820 | 5 |
| 821 | 6 |
| 822-824 | 5 |
| 825 | 6 |
| 826-828 | 5 |
| 829-834 | 6 |
| 835-838 | 7 |
| 840-847 | 6 |
| 850-854 | 7 |
| 855 | 6 |
| 856-858 | 7 |
| 859-860 | 6 |
| 863-864 | 7 |
| 865-883 | 6 |
| 884 | 5 |
| 885 | 6 |
| 889-898 | 7 |
| 900-930 | 7 |
| 931 | 8 |
| 932-933 | 7 |
| 934 | 8 |
| 935-938 | 7 |
| 939-941 | 8 |
| 942 | 7 |
| 943-951 | 8 |
| 952-953 | 7 |
| 954-955 | 8 |
| 956-961 | 7 |
| 962-966 | – |
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| 970-994 | 7 |
| 995-999 | – |

UPS Ground Shipping is at the AES Flat Rate. The chart below shows faster UPS shipping methods and their rates. This zone chart is for shipments made from the Milwaukee store. The rates from Branch Stores may vary.

# frequently asked QUESTIONS

***Where does the term "HAM" come from?***

There are many stories as to the origin of the term HAM. One story is that it originally meant "poor operator or plug". This stems from the early days of telegraphy. In those days, spark was the way to go and every station occupied the same wavelength, or more accurately every station occupied the whole spectrum with its broad spark signal. Government stations, ships, coastal stations as well as the growing number of amateur operators all competed for time and signal supremacy. To make matters worse for the commercial operators, some HAM stations were very powerful. In some cases two amateurs working each other across town could effectively jam all the other operators in town. Needless to say, this would frustrate commercial operators to no end. The commercial station would call the ship whose weaker signals had been blotted out by the amateurs and would say those darn HAMS are jamming you! The Amateurs, not knowing the true meaning of the word picked it up and started calling themselves HAMS. The original meaning was forgotten as time passed.

***Can I buy Amateur Radio Equipment before I receive my license?***

It is perfectly fine to purchase and use equipment in receive only mode until your license arrives. Then you may also use it for transmit. Listening is a very good way to learn some of the on air protocol.

***Where can I take the test to get my license?***

Most area's have clubs to contact, or usually there is testing at Hamfest or swap meets. Your best bet is to call the ARRL at (860) 666-1541 or (800) 243-7767 for the name of a volunteer in your area.

***Does AES have phone numbers for the product manufactures' featured in the catalog?***

Yes we do. You will find them on page 160 in our catalog.

***When will I receive my order?***

Generally orders are shipped the same day. And depending on your location to an AES store you should receive it between one and five working days.

***If I move will I still get the AES Catalog?***

Yes, but you must send us your new address, preferably on the Post Office's change of address card.

***Do you accept credit cards?***

Yes we currently accept Visa, MasterCard, Discover, Novus and American Express.

***What is the difference between a vertical antenna and a beam?***

Vertical antennas will transmit and receive signals in all directions at the same time fairly well, whereas a beam or yagi will perform extremely well in the direction it is pointed. Thus it also requires a rotor to turn or point the antenna in the direction you want.

***What type of coax should I use?***

That really depends on the installation. If the antenna will be a vertical or a stationary, you can use 9913 which is a type of RG-8. This cable has very low loss but is somewhat rigid. If the installation is utilizing a beam with a rotor, a more flexible cable should be used. Two very good choices are 9913F (flexible) or 8214. These are also types of a RG-8 coax. RG-213 should be used when high resistance to UV rays is important. In a mobile installation RG-58 would be the cable of choice.

***What are the advantages of the Nickel Metal Hydride battery?***

The Nickel Metal Hydride battery has no memory effect like a NiCad. It also has a higher capacity, 50–100% over NiCad. In addition, it is smaller and lighter. Overcharge and reverse polarity protection is an added plus. The discharge curve is flat on this battery. It will remain at full voltage until it is approximately 80% spent. The nickel metal hydride is also environmentally friendly.

***Is AES® accessible on-line?***

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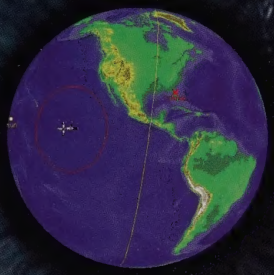

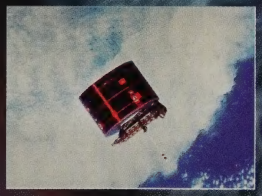

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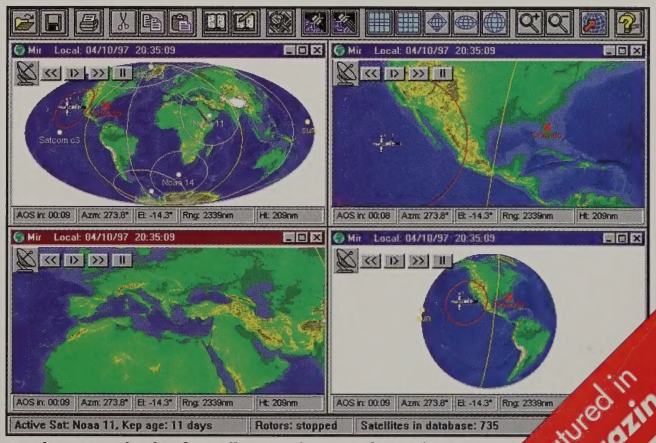


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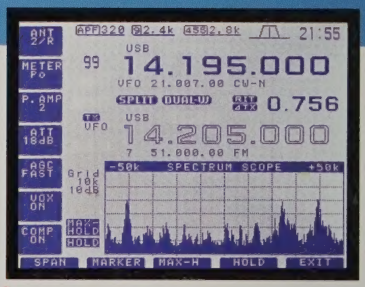


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